IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

MDL NO. 2804
CASE NO. 17-md-2804
Hon. Dan A. Polster

IN RE: NATIONAL PRESCRIPTION OPIATE LITIGATION

THIS DOCUMENT RELATES TO:
TRACK THREE CASES

REMOTE VIDEO DEPOSITION OF
CALEB ALEXANDER, M.D.
May 27, 2021

REPORTED BY: Laura H. Nichols
Certified Realtime Reporter,
Registered Professional
Reporter and Notary Public

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(All Appearing Remotely)

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OTHERS PRESENT:

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Mr. Justin Bond, Videographer
Veritext Legal Solutions

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S T I P U L A T I O N

IT IS STIPULATED AND AGREED, by and between the parties, through their respective counsel, that the deposition of CALEB ALEXANDER, M.D. may be taken before Laura H. Nichols, Commissioner, Certified Realtime Reporter, Registered Professional Reporter and Notary Public;

That it shall not be necessary for any objections to be made by counsel to any questions, except as to form or leading questions, and that counsel for the parties may make objections and assign grounds at the time of trial, or at the time said deposition is offered in evidence, or prior thereto.

I, Laura H. Nichols, a Certified Realtime Reporter and Registered Professional Reporter of Birmingham, Alabama, and a Notary Public for the State of Alabama at Large, acting as Commissioner, certify that on this date, as provided by the Federal Rules of Civil Procedure of the United States District Court, and the foregoing stipulation of counsel, there came before me remotely via Zoom, on May 27, 2021, commencing at 9:33 a.m. EDT, CALEB ALEXANDER, M.D., witness in the above cause, for oral examination, whereupon the following proceedings were had:

* * *

THE VIDEOGRAPHER: Good morning. Today is May 27th, 2021. We are on the record at 9:33 a.m. Today we will take the videotaped deposition in Case Number 17-md-2804. This deposition is being held remotely.

Would you please swear the witness?

CALEB ALEXANDER, M.D.,

having been first duly sworn, was examined and testified as follows:

EXAMINATION BY MR. MANNIX:

Q. Dr. Alexander, good morning. My name is Paul Mannix, again, and I represent Giant Eagle in this matter. We've called you here today to be deposed in connection with your expert report in the Track 3 litigation, opiate litigation.

You are in Maryland; is that right?

A. Yes, that's right.

Q. Okay. I'm here in Pittsburgh and I believe we're ready to begin.

I confirm that you did receive documents that were sent to your office, and we'll be referring to those as we proceed, at least a large number of those. And I'll ask you to pull them out of the envelope when the time arises.

To begin with, can you state your name for the record?

A. George Caleb Alexander.

Q. And your current employer is whom?

A. I'm employed through Johns Hopkins University. And I also have a consultancy that's separate and independent from Johns Hopkins.

Q. And what is that consultancy name?

A. Monument Analytics.

Q. You understand you're under oath

today; is that right?

A. Yes, I do.

Q. And any reason you cannot give truthful and complete testimony here today?

A. No, there's no reason why I can't give truthful and complete testimony.

Q. Have you testified in a deposition before?

A. Yes, I have.

Q. And how many times have you testified in a deposition?

A. I believe two. But my -- you know, Mr. Arnold might correct me if I'm mistaken there.

Q. Okay. And we did receive, in your report, an Appendix C, which identified two cases that you were deposed in.

Any other cases, besides those cases, that you've been deposed in?

A. Well, I'm actually second-guessing myself and wondering if it's three.

But may I ask Mr. Arnold to -- reply or let me know the two that you have and I can note if there's a third that I think may also be relevant?

(Exhibit 6 was marked for

identification.)

Q. (BY MR. MANNIX:) Well, why don't we do this. We're going to get into that exhibit at some point in time. Why don't you open up the package, Exhibit 6.

A. Okay.

Q. And let me know if that's Appendix C to your report.

A. Yes, it is.

Q. And I've reviewed this, and it looks like I've seen three cases on Appendix C, two in the first page and one on the second page, which it appears you're deposed in. Is that accurate?

A. Yes. So I believe the first, you know, CT1 entitled Orange County, and the California case, and the CT2, Cabell County and City of Huntington. So it is three total.

Q. Other than those cases, have you been deposed at all?

A. No, I don't believe so.

Q. Okay. So you have a general understanding. I'll review some ground rules with you. I'm going to ask you questions today. If you don't hear them, let me know and I'll repeat them.

If you don't understand the question,

let me know and I'll rephrase it. And do your best to let me fully ask my question before you answer and I will do my best to let you fully answer before I ask my next question. Okay?

A. Of course.

Q. What did you do to prepare for this deposition?

A. Well, I mean, in some sense, my -- all of the work that I've done, understanding the local context of Lake and Trumbull Counties and reviewing all of the materials and writing my report is preparation.

But in addition to that, I met with counsel and some team members that supported me in producing my report to review -- to review my report.

Q. Okay. And I understand your point. I'm asking primarily, after you prepared your report, you were notified you were going to be deposed today. And what did you do in order to prepare specifically for the deposition today?

And you said you met with team members; is that right?

A. Sure, correct.

Q. And you met with counsel; is that

correct?

A. Correct, yes.

Q. And did you also review documents in connection with your preparation?

A. Yes, I did.

Q. And I assume you reviewed your report; is that right?

A. Yes, it is.

Q. Any other specific documents that you reviewed that you thought necessary to review in order to prepare for your deposition?

A. Well, by "report," I reviewed both my narrative report as well as, for example, the redress models that are included in my report. And I reviewed some background material that was referenced in my report.

Q. What background material do you recall reviewing?

A. For example, information from -- I'm sorry. I'm trying to recall. But another expert that submitted -- that submitted a report regarding the use of flags to identify potentially problematic or high-risk controlled substance, you know, prescribing or dispensing or distribution and the like.

Catizone, I believe it is an expert, Mr. Catizone.

Q. Okay. Any other documents you recall reviewing, other than your report, redress model and the Catizone report?

A. Well, some information from the Ohio substance abuse monitoring system that provides some high-level trends in terms of adverse events related to opioids in the state.

Q. Okay.

A. I also reviewed some information about Lake and Trumbull Counties that provides background information, similar background information at a county level.

Q. Okay. What documents were those that you just referenced there? Not the OSAM reports, but the Lake and Trumbull information, what specifically did you review in preparation for today's deposition?

A. Well, for example, the community health improvement plans and Lake County's HUB report.

Q. Okay. Anything else that you recall digging into in order to prepare for the deposition?

A. Those were the -- those were the main materials. I mean, the vast majority of what time I did spend was spent simply reviewing my report itself.

(Exhibit 7 was marked for identification.)

Q. (BY MR. MANNIX:) Okay. If you could go to package Exhibit 7.

A. Okay. I have that.

Q. I am hoping Exhibit 7 is your CV. Is that your CV?

A. Yes, it is.

Q. And that's Appendix B to your report; is that right?

A. Yes, it is.

Q. And I won't go over this in great detail, but can you please summarize your educational background, the degrees that you hold?

A. Well, I grew up in Pittsburgh. And I went to Oberlin for two years for college in Ohio, just north of Lake and Trumbull Counties, and went to University of Pennsylvania to complete my undergraduate training.

At that point, I returned to Ohio and went to medical school at Case Western Reserve

University.

Following medical school, I went back to Philadelphia to complete a residency in internal medicine at the University of Pennsylvania.

Following my residency, I moved back to the Midwest, to Chicago, to the University of Chicago, to complete a Robert Wood Johnson Clinical Scholars Fellowship, which provides training in the nonbiologic sciences important to healthcare.

And that -- you know -- and I completed a master's in science while at the University of Chicago, and that marked the end of my formal educational training.

Q. What was your masters of science, what specific field?

A. It was a blend of health services research, biostatistics and epidemiology.

Q. And you are -- are you board certified as a doctor?

A. Yes, I am.

Q. In what field?

A. Internal medicine.

Q. Anything else?

A. I'm only board certified in internal medicine.

Q. Okay. And what licenses do you hold?
A. I have a license to practice medicine in the state of Maryland. And I have the appropriate state and federal controlled substance prescribing licenses, so as to allow for me to prescribe controlled substances.
Q. Any other licenses?
A. Well, I have -- I mean, I have a driver's license, but I don't have other medical licenses.
Q. Any other professional license you don't hold; is that right?
A. No, not -- no. I don't believe I do.
Q. And you are presently employed with Johns Hopkins. What is your title with Johns Hopkins right now?
A. Professor of epidemiology and medicine.
Q. Okay. Now, correct me if I'm wrong. As I understand, you're not a pharmacist, correct?
A. I'm not a practicing pharmacist, no, that's correct.
Q. You are not a toxicologist, correct?
A. I'm not a practicing toxicologist, but I have significant experience studying

substances such as opioids and understanding their epidemiology and -- and the evidence base to support abatement efforts.

Q. You're not a licensed toxicologist or hold yourself out as an expert toxicologist, practicing toxicologist; is that fair?

A. Well, I was asked to develop a comprehensive abatement plan for Lake and Trumbull Counties, and that didn't require me to have such a license, and I don't have such a license.

Q. Okay. And I'm not -- I'm just asking, understanding what your credentials are. I'm not asking what you think is required in order to prepare your report. So let me just make sure I understand who you are and what licenses you hold and what expertise you have.

Am I correct that you are not a statistician?

A. I routinely employ statistics, specifically biostatistics in the work that I do. So while I primarily identify myself as an epidemiologist and practicing internist, virtually all of my epidemiologic work incorporates biostatistics.

Q. Are you a pain management specialist?

A. I'm a practicing internist, and many of my patients have chronic and acute pain. But I don't exclusively practice pain management, nor market my services as a pain management specialist.

Q. Do you hold yourself out as an expert in pain management?

A. As a practicing internist, I have to understand how to identify and manage pain because pain is so prevalent in my patient population. So there's not a day that I have clinic where a patient isn't -- one of my patients that I'm seeing isn't likely to have some complaint that involves pain.

Q. Do you hold yourself out as an addiction specialist?

A. I have been studying the opioid epidemic for, you know, a decade or more. And understanding the nature of addiction and how it manifests and how it can best be treated is something integral to what I do.

But I don't have an addiction practice, if that's what you're asking. In other words, I don't market myself as an addiction specialist.

Q. I'm just asking, do you hold yourself

out as an addiction specialist, yes or no?

A. Well, I believe I answered that.

Q. Is it "yes" or "no"?

A. What I would say is that addiction is a fundamental feature of the opioid epidemic, and much of my work is focused on understanding the nature of the epidemic, as well as how harms can best be mitigated. And so I have extensive experience in studying addiction.

Q. Do you consider yourself an addiction specialist, yes or no?

A. Clinically or nonclinically?

Q. Clinically. Clinically.

A. As a practicing internist, I have to be comfortable and equipped to manage any patient that walks in the door. And unfortunately, all too often, my patients have been impacted by addiction.

Q. So what I understand you're testifying to -- you're not giving me a yes-or-no answer -- you hold yourself out as an addiction specialist from a clinical standpoint, correct?

MR. ARNOLD: Objection. Asked and answered.

MR. MANNIX: It hasn't been answered yes or no. I don't know what he -- whether he's

saying he's an addiction specialist from a clinical standpoint or not.

Q. (BY MR. MANNIX:) Yes or no?

A. What I would say, as a practicing internist, because of how common addiction is, I have to be capable and prepared to manage addiction.

And so as a practicing internist, I am comfortable screening for, identifying and assisting patients in treating addiction.

Q. Do you hold yourself out as a clinical specialist in opioid disorders?

MR. ARNOLD: Objection to form.

A. I'm sorry. Can you ask that again, please?

Q. (BY MR. MANNIX:) Do you hold yourself out as a clinical specialist in opioid disorders?

A. Can you say more about what you mean by "hold yourself out as"?

Q. Do you consider yourself a clinical specialist in opioid disorders?

A. Unfortunately, I have encountered many patients over the past twenty years of my patients that have been impacted directly by the

opioid epidemic, some with addiction, some who have lost loved ones and so on.

And so as a practicing internist, I feel equipped, and I think it's important that I'm equipped, to identify and address patients that have opioid use disorder, or who have otherwise been impacted by the opioid epidemic.

So I will defer to you as to whether or not that qualifies as an opioid addiction specialist.

But I primarily hold myself out as a practicing internist who's equipped to manage, you know, the day-to-day problems that come in the door. And all too often, that includes individuals that have been impacted by the opioid epidemic.

Q. Do you consider yourself a clinical specialist in opioid disorders, yes or no?

MR. ARNOLD: Objection to form.

Q. (BY MR. MANNIX:) I want to understand whether you consider yourself one, Dr. Alexander, yes or no?

MR. ARNOLD: Objection, form.

A. I consider myself a practicing internist who's equipped to manage the next patient that walks in the door. And unfortunately, all too

often, that may be someone who has been impacted directly by the opioid epidemic.

Q. (BY MR. MANNIX:) If you could turn to Exhibit 6. Again, we talked about this previously. This is Appendix C to your report.

Do you have that in front of you?

A. Yes, I do.

Q. You have listed the other cases where you have been retained as an expert in Appendix C, Exhibit 6. They all appear to relate to opioid issues; is that right?

A. Yes. Yes, that is --

Q. And who retained you in the present case? Who do you understand retained your services in the present case?

A. Well, I --

THE REPORTER: Mr. Arnold -- Mr. Arnold, your paper is shuffling, so if you could mute yourself a little bit, I'd appreciate it.

MR. ARNOLD: Sorry. My apologies.

A. In the present case, I mean, I'm here to serve the citizens of Lake and Trumbull County and the courts and the parties involved. My direct contact through counsel has primarily been with

Motley Rice.

So I don't know the precise answer to your question, I'm sorry to say. But, you know, my primary contact is through Motley Rice. But, again, I view my role as really serving the citizens of Lake and Trumbull Counties, as well as the other stakeholders in this case.

Q. (BY MR. MANNIX:) Who initially contacted you to get involved in this case?

A. I don't remember.

Q. Do you remember what law firm or what employer they had, who contacted you?

A. I believe it was likely Motley Rice, somebody at Motley Rice, but I don't know for sure.

Q. In these other cases where you provide expert services listed on Appendix C, was your primary contact in those cases someone from Motley Rice?

A. Yes. Yes, it has been.

Q. In the context of all of the cases that you worked on listed in Appendix C where Motley Rice was your primary contact, how much have you been paid, in total, for those cases? And when I say "you," I'm talking about Monument Analytics. Do you know how much they've invoiced total?

A. I don't know.
Q. Has it been over a million dollars?
A. Yes, I believe it has.
Q. Has it been over two million dollars?
A. I believe it has.
Q. Has it been over three million dollars?
A. I believe it probably has.
Q. Over four million dollars?
A. I do not know.
Q. And what is your present hourly rate?
A. Nine hundred dollars an hour.
Q. If you could go through the process -- we've opened some of them already, but why don't you go ahead and open the packages, Exhibits 1 through 8, which I think they were sent out as your report and your various appendices. I think that's A through F. And we'll talk about those.
A. Sure. I will just stand up for one second, but I'm here.
Q. Yeah, okay.
(Pause.)
A. Okay. I'm all set.
Q. (BY MR. MANNIX:) All right. Do you

have Exhibits 1 through 8 available in front of you?

(Exhibit 8 was marked for identification.)

A. Yes. Yes, I do.

(Exhibit 1 was marked for identification.)

Q. (BY MR. MANNIX:) Okay. The Exhibit 1, that is your expert report, without the appendices; is that right?

A. Yes, that's right.

Q. And that is dated 4 -- April 16th, 2021, correct?

A. Yes.

Q. And is it fair to say that this contains a description of your analysis and your conclusions and the opinions you intend to offer in this case; is that fair?

A. Well, I haven't reviewed the document that was sent to me. But assuming that it represents -- that it's actually my report and it was printed correctly and so on and so forth, yes, that does represent -- in addition to the appendices that accompany it -- the opinions that I would be prepared to provide to the courts, unless

the judge and parties requested other information of me, in which case I would try to provide whatever I can to be of service.

Q. Okay. And I'm not going to ask you to review it word for word. But as we go through this, if you see anything that indicates to you that what I sent you was not your report, just go ahead and let me know that. Okay?

A. Yes.

(Exhibit 5 was marked for identification.)

Q. (BY MR. MANNIX:) So look at Exhibit 5, if you would. Have that available. I'm going to quickly refer to your Exhibit 1 report. And then I want to go to Appendix 5, but would you agree -- or Appendix D, which is Exhibit 5.

Am I right that what's in front of you as Exhibit 5 is Appendix D?

A. I don't see a cover sheet to it, and I don't know the ordering of the Appendices. But it certainly seems plausible that it was Appendix D.

Q. Yeah. I'm not sure if there was a cover sheet on your Appendix D. But in any event, it says -- does it say in the upper right-hand

corner, "Materials Relied Upon - Report"?

A. Yes, it does.

Q. If you look at your expert report, Paragraph 11 -- this is Page 6 of Exhibit 1 -- and the last sentence of Paragraph 11 says, "A complete list of the documents I consulted in preparing this report is provided as Appendix D."

Did I read that correctly?

A. Yes.

Q. All right. And now if we turn to Appendix D, Exhibit 5, with that understanding, I want to talk to you about what you identify as the complete list of the documents you consulted. I --

A. May I say one thing, please?

Q. Well, I'm just going to ask you some questions.

A. Okay. Fair enough.

Q. If you want to answer the questions.

A. Okay.

Q. The Appendix D, I've reviewed Appendix D and I've noted, at least -- I know you may prove me wrong, is I did not see any reference to deposition transcripts that were reviewed listed in Appendix D.

Did you list -- are you aware of any

depositions listed in Appendix D?

A. I would have to review the appendix carefully to identify those. But I just want to add that the sentence at the end of Paragraph 11 is over and above any references that may be included in my report itself.

In other words, my report, I believe, includes, I don't know, five hundred or six hundred references. And so Appendix D provides supplemental references that were not formally referenced in my report, but were nevertheless consulted.

Q. Okay. I understand that. I understand that qualification. Fair enough.

Let me ask you, just -- do you know if you reviewed any depositions in connection with preparing this report?

A. I did. I did.

Q. What depositions do you know that you reviewed?

A. I reviewed -- well, I'm sorry. Depositions. I'm sorry. I thought you were asking about expert reports.

Did I review -- I don't believe that I reviewed depositions.

Q. Okay. If you look at Page 12 of Appendix D --

A. You know, I would want to -- I mean, I would like to look at the references in my report proper in order to better answer your question as to whether I reviewed depositions. I do not recall having done so, but I did have team members that helped me. Ultimately, you know, the work represents my own. But I would like to review the references in my report in order to provide you with a more definitive answer regarding your question.

Q. So if there are depositions referenced in your report, it's your understanding that either you or a team member reviewed those depositions; is that right?

A. Correct, or pieces of them. I mean, you know, for example, my discussions with April Caraway and Kim Frasier were really helpful in understanding the context on the ground and in Trumbull and Lake Counties. And so -- but I don't recall whether or not, as part of that process, I or a team member reviewed their actual depositions.

So, again, it would be helpful to review my report in order to provide you with a,

you know, definitive answer regarding that.

Q. Understood. But as you sit here today, you don't have a specific recollection, aside from reviewing your report, of what depositions, if any, you reviewed; is that fair?

A. I don't recall having reviewed any depositions, as I sit here today, to prepare my report.

Q. Okay. If you look at Page 12 of Appendix D, Exhibit 5 -- you have listed there the documents that you have reviewed by Bates number. Do you see that?

A. Yes.

Q. It says, "Production Documents."

You know, there's three pages of listed documents that seem to have Bates numbers of Lake or TRUM, T-R-U-M, meaning produced by Trumbull. Do you see that?

A. Yes, I do.

Q. And are you aware that Lake and Trumbull County produced over a million documents in this case?

A. No, I'm not aware of that.

Q. With that understanding, it's fair to say that you did not review over a million

documents produced by Lake and Trumbull County in this case; is that fair?

A. You know, I was asked to develop a comprehensive abatement plan. And I reviewed documents that my team and I identified as being most crucial to that effort. So what I was asked to do didn't require for me to review a million documents.

Q. Okay. And I'd ask you to just answer the question that I'm asking. And I didn't ask for an explanation as to why or why you didn't review a million documents. I just asked whether you reviewed them.

My understanding is you didn't review over a million documents produced by Lake and Trumbull Counties; is that fair?

A. Well, again. I was asked to develop --

Q. I'm not asking what you were asked to do, Doctor. I'm asking you whether or not you did. And I'm asking that you answer simply the question that I am asking.

MR. ARNOLD: Objection, form.

Q. (BY MR. MANNIX:) And I'll ask it once again. And I am going to request that you

answer the question asked, not what you want the question to be. Okay?

You've identified here -- and I don't have the exact number, but it's three pages, and it certainly looks like less than two hundred documents in this case that were produced by Lake and Trumbull Counties; is that correct?

A. I'm sorry. Can you ask that again, please?

Q. What you've identified here in your Appendix D as produced documents are the produced documents that you reviewed; is that right?

A. No. That's not correct.

Q. These are not -- you reviewed additional documents that were produced in this litigation, other than what you have identified here?

A. Yes, that's true.

Q. And what documents are those?

A. Well, I would have to look through them, but there are six hundred and fifty-one references in my report, and some of those were produced. So, you know, we would need to look through those together to answer your question.

Q. Okay. In combination with the

documents identified here starting on Page 12, and what's referenced in your report, identify the produced documents that you reviewed in this case; is that fair?

A. I'm not sure. I'm not sure.

Q. Okay. How were the documents that you reviewed in this case collected?

A. Well, I discussed that in my report, so I'd like to look at my report with you in order to answer that question.

Q. As you sit here today, you're not sure how your -- the documents that you reviewed were selected; is that correct?

A. No. My recollection --

MR. ARNOLD: Objection as to form.

A. I'm sorry. Can you ask that again, please?

Q. (BY MR. MANNIX:) As you sit here today, you are not sure how the documents that you reviewed were selected; is that correct?

MR. ARNOLD: Objection, form. Sorry.

A. That's not correct.

Q. (BY MR. MANNIX:) Okay. How were they selected?

A. Again, I would -- as I discuss in my

report -- and it would be helpful to review my report with you -- I describe a careful process whereby I comprehensively evaluated both the produced documents, as well as other literature, white papers, reports, peer-reviewed papers. And so on. And in a careful and systematic process, used these to develop my recommendations.

Q. If you can access in your report quickly -- you can refer to your report. I'm not precluding you from doing that. I don't want you to waste significant time that we have today to talk to you about your report in locating that. But if you know where that is, then that's fine.

A. Thank you.

So, for example, in Paragraph 15, I describe the stepwise process that I used to develop or review the scientific evidence. So for example, I started with the information I was aware of. I supplemented this with the review of additional academic and governmental studies, included in both their reference list, as well as subsequent reports that have cited those studies.

And I'd also used information such as I describe in Paragraph 11. So this includes reviewing materials, including Bates stamped

documents, deposition testimony provided to me by counsel, although I don't recall, as we've discussed, specific deposition records, published reports regarding the epidemic, information derived from other local and national sources, peer-reviewed literature, white papers, reports from public health authorities, nonprofit organizations and other publicly available sources.

In addition, I, along with some of my team members, spoke with local stakeholders, such as those that I've mentioned.

So that provides the waterfront, if you will, of the -- of the sources that I used.

And then, you know, there's a sort of stepwise process of evaluating the quality of information, and that also is included in Paragraph 15 where I discuss a number of factors that are used to assess the scientific quality of information to address describing efforts to abate the opioid epidemic.

Q. Let me focus on Paragraph 11. You say the sources include, "Bates-stamped documents and deposition testimony in this case provided to me by counsel."

I want to focus on that sentence.

Okay?

A. Okay.

Q. How were the Bates-stamped documents that you reviewed provided to you by counsel selected?

A. I -- I don't know. You would have to ask the counsel.

Q. Okay. So your understanding, the Bates-stamped documents that you reviewed were not selected by you, they were selected by counsel and provided to you; is that fair?

A. Well, I mean, I -- no, not entirely. I mean, to be fair, I discussed with counsel -- I mean, my typical process is to discuss with counsel my goals and objectives and the type of information that I need. And then in an iterative process, review materials and discuss whether further materials would be helpful for review or not.

And, you know, counsel has been responsive and receptive and willing to provide me with the information that I've requested. And at no point did I have a concern during the process of developing my report that there were crucial statistics or data points or programs relevant to the case that I was not privy to or that I didn't

have access to understanding.

Q. Okay. So the process was, in part, you would explain to counsel, plaintiff's counsel, the type of documents that you were looking for, and they would search the produced documents and see if those could be located and provided to you. Is that generally correct?

A. Yeah. I mean, much of the information that I use is in the public domain.

Q. Well, wait a second, Doctor. I'm not talking about that. I want to focus on what my question is. And I'm talking about this sentence of Bates-stamped documents. So don't move on to --

MR. ARNOLD: Object to the form. The witness should be allowed to finish his answer.

I'll point out that some of the produced documents are also in the public domain, so his response was responsive to the question.

Q. (BY MR. MANNIX:) Okay. I'm going to ask to focus the question again.

On the Bates-stamped documents, those were -- you had discussions with counsel, and the type of documents that you were looking for, and the Bates-stamped documents were provided to you by counsel, correct?

MR. ARNOLD: Objection. Asked and answered.

A. Well, I think I answered that question. But I used many different sources of information. And wherever possible, triangulated information through the comparison of different sources of information.

And the core of my abatement program is not terribly controversial. That is there's widespread consensus regarding what needs to be done to reduce opioid-related morbidity and mortality.

The most important part of my report, as it applies to Lake and Trumbull Counties, is understanding the experience of these counties on the ground.

And I was fortunate to have more than sufficient opportunities to do so, both through my review of specific reports, such as the community health improvement plans, and the proceedings of the ASAP Coalition, and the Lake County Opioid Task Force, through my conversations with individuals like Kim Frasier and April Caraway. Through my review of state -- data provided by the State regarding county-level trends, and through many

other sources of information.

Q. (BY MR. MANNIX:) Did you review any documents that were produced by the defendants, to your knowledge?

A. I don't believe, for this case, that I did.

Q. Did you not consider documents produced by defendants relevant to your analysis?

A. I was asked to develop a comprehensive abatement plan for Lake and Trumbull Counties. And I didn't -- and, you know, at no point did I discuss or was I advised to review specific documents from the defendants as part of developing recommendations for how to comprehensively abate the epidemic.

Q. So plaintiff's counsel didn't send those to you to ask you to review. But what I want to understand is, did you think to yourself, those documents produced by defendant, those won't be relevant for my analysis, I don't need to see them?

A. What sort of documents are you referring to?

Q. Any documents from defendants. Documents that were produced by defendants. Did you consider those relevant to your analysis and

decide not to review them, despite the fact you thought they were relevant?

MR. ARNOLD: Objection, form.

A. I'm sorry. Can you ask that again, please?

Q. (BY MR. MANNIX:) Did you consider documents produced by defendants relevant to your analysis and decide not to review them in any event, despite the fact they were relevant?

A. I was asked to develop a comprehensive and evidence-based abatement plan for Lake and Trumbull Counties. And I don't believe that reviewing those documents was vital to my development of such a plan.

Q. Did you not consider relevant to determine if any of the pharmacy defendants were involved in providing some of the programs that you have identified as needed for the abatement?

A. I was not asked as part of -- I was not asked to perform a comprehensive retrospective evaluation of efforts to date, you know, defendant by defendant in these counties.

Q. Did you not consider existing programs within the counties to be relevant to your analysis and your abatement program?

A. Did I not? I'm a little bit confused by the construction. I mean, I think -- I think the answer --

Q. Let me ask this: Did you -- let me ask it this way: Did you consider existing programs within the communities to be relevant to your analysis of the abatement program that you're proposing?

A. Yes, I did. And I carefully evaluated a great number of programs that have been undertaken in Lake and Trumbull Counties in an effort to reduce opioid-related morbidity and mortality.

Q. So if the pharmacy defendants had existing programs which were set up to help the opioid epidemic in Lake County and Trumbull County, then it would have been relevant to review those; is that fair?

MR. ARNOLD: Objection to the form.

A. Well, I wasn't asked -- I'm sorry. Go ahead, Mr. Arnold.

MR. ARNOLD: Objection to form. You can answer.

A. I wasn't asked to perform a quantitative evaluation of programs to date. I did

qualitatively evaluate a large number of activities undertaken in Lake and Trumbull Counties. And I also -- I'm aware of and understand the potential value of interventions that can be implemented throughout the supply chain, including by pharmacies and pharmacists. And I believe that I discussed these in the context of my report.

Q. (BY MR. MANNIX:) You just stated that you weren't asked to perform a quantitative evaluation, but you did conduct a qualitative evaluation; is that right?

A. Correct. I -- I qualitatively evaluated a number of different interventions and programs and services that have been offered by Lake and Trumbull County or in Lake and Trumbull County, some by the County themselves, some by the State. And I did qualitatively evaluate these because these were helpful in my understanding the -- you know, the contours of the opioid epidemic to date.

Q. Okay. And I have to understand this a little better. If there were a hundred programs in Lake County to address the opioid program [sic], are you saying that it wasn't important for you to analyze all one hundred of those programs; all you

had to do is take a sampling and analyze the quality of those several programs, and not worry about additional programs and analyze all of them?

Is that what you say by distinguishing between a qualitative analysis, which you did, and a quantitative analysis, which you said you didn't do?

MR. ARNOLD: Objection to form.

A. No, it is not.

Q. (BY MR. MANNIX:) If there were a hundred programs, it would have been important for you to review all one hundred programs and do a qualitative analysis of all hundred programs instead of just a few that you selected, correct?

A. No. I -- when I say "qualitative," I'm -- firstly, when I say "qualitative," I'm not talking about a formal evaluation of the quality of a given program.

I think your question -- one question before the last one, sort of, you know, switched to talking about the quality of a program.

When I say "qualitative evaluation," I'm saying that I used this information as a basis to understand the contours and the efforts that have been undertaken.

And, again, I believe that there are, as I describe in my report, important opportunities for pharmacies and pharmacists and others in the pharmaceutical supply chain to implement processes and procedures to improve, you know, the safe distribution of controlled substances, and to reduce morbidity and mortality from these products.

But keep in mind, my report is forward looking. So it's built upon an understanding of Lake and Trumbull County, but I'm -- it's forward looking. And I didn't need to net out the certain level, current level or provision of services.

It's clear that whatever has -- despite the best efforts of the counties, and despite their having done, I believe, the best they can with the resources that they've had available, I believe there's still an epidemic in these counties. And so my report focuses on looking forward, not looking backwards.

Q. But wouldn't it be important to know -- I understand they existed previously, certain programs, exist now. But if the intent is they will continue to exist, right, outside of whether your abatement program is put in place,

isn't it important to know what those programs are that are intending to proceed prospectively?

MR. ARNOLD: Objection to form.

A. I'm sorry. Can you ask the question again, please?

Q. (BY MR. MANNIX:) Isn't it important to understand -- I gave you the example before of if there's a hundred programs that exist, and if all one hundred are intending to continue to exist into the future, isn't it important for you to know what those programs are so that you can build on those instead of abandoning all of those and start from scratch?

A. Well, I'm not recommending abandoning anything. I mean, ultimately it's up for the counties themselves to decide what the, you know, composition of their abatement going forward will be.

But, again, I do discuss the important role of actors in the pharmaceutical supply system in my report.

And I'd be happy to review that section of my report with you if that would be helpful for you to understand what I believe -- you know, what I believe -- how I believe that actors

within the pharmaceutical supply system can implement processes that can reduce opioid-related injuries and deaths.

Q. How did you confirm, one way or another, whether those processes and actions by the pharmacy companies that you're speaking of weren't already in place?

A. I was not -- my report -- I was asked to develop a comprehensive and evidence-based abatement plan. I was not asked to do a retrospective evaluation of the adequacy of programs to date by pharmacies.

Q. But if they're already -- if the ones that you recommend moving forward are already in place, why would you not analyze that and take that into consideration to figure out whether your proposal would be effective or not? If they're already in place, and you're proposing to do exactly what's already in place, why would that be successful?

A. My --

MR. ARNOLD: Objection. Incomplete hypothetical.

A. I'm sorry. Mr. Arnold, I think I spoke over you.

MR. ARNOLD: Yeah. I just had an objection. Incomplete hypothetical. You can go ahead and answer.

A. My recommendations, Mr. Mannix, rest on an enormous evidence-based, a vast evidence base of ultimately thousands, tens of thousands of scientific studies. So, you know, the recommendations that I make are not pulled out of a vacuum.

But just to be clear, I was not asked to identify what's been done and net that out and only recommend what I think is needed above and beyond what may already be taking place. I mean, consider treatment. I discuss treatment. And you could have the same argument about treatment.

Well, if Lake Geauga Recovery Center is already offering treatment, then why are you recommending treatment in your report?

It's because I wasn't asked to subtract out the services or the programs that may already be offered.

Q. Okay. So you were doing what you were asked to do by Motley Rice in proceeding the way you did; is that right?

A. Well, you would have to ask them. I

mean, that seems to me like a question that has -- you know, that it's not fair for me to answer alone.

But my hope is that my report is useful for the courts, and most importantly, for the citizens of Lake and -- Lake and Trumbull County that have been, you know, devastated by the opioid crisis.

Q. Okay. That's your hope, right?

A. Yeah.

Q. But were you doing -- using your own discretion on what the scope of your work would be, based on what your hope was, or were you doing what you were asked to do by Motley Rice --

MR. ARNOLD: Objection to form.

Q. (BY MR. MANNIX:) -- for the work you performed?

A. Well, I'd like to just review.

So in the very first paragraph of my report, I say, "I have been asked to discuss ways to abate or reduce the harms caused by the opioid epidemic, which has devastated the communities. I have also been asked to estimate the size of specific populations that may require abatement interventions."

And that's what I believe I have done. I have discussed ways to abate or reduce the harms, and I have also estimated the size of specific populations.

Q. Okay. So that's what you were asked to do and that's what you did; is that right?

A. I believe so. I hope so. Again, I think you would have to ask others to judge that as well. I don't feel that I alone should be the one to judge whether or not I have fulfilled what I was asked to do.

Q. You attempted to do what you were asked to do, correct?

A. I did.

Q. Do you know Harvey Rosen? Are you familiar with Harvey Rosen?

A. Yes, I am.

Q. Have you met with Dr. Rosen personally?

A. No, I have not. I don't believe -- I don't believe so. I suppose it's possible in the course of other litigation work, such as CT1, that we may have been in the same room. But I don't recall.

Q. Okay. You didn't fly out anywhere or

drive out anywhere and meet with him, correct?

A. Not -- not -- not recently. Unfortunately, the pandemic has made that sort of undertaking less easy than it would otherwise have been.

Q. Okay. That's a good clarification. Have you had personal phone calls or Zoom calls directly with Dr. Rosen?

A. Yes, I have.

Q. And when did those take place?

A. I don't recall.

Q. Did they take place before the date of your report and his report of April 16th, 2021?

A. I believe they would have.

Q. Approximately how many Zoom calls or phone calls did you have with Dr. Rosen?

A. I personally -- I believe I personally had one or two. And I believe members of my team likely had many more.

Q. Have you reviewed Dr. Rosen's report dated April 16th, 2021?

And it's Exhibit 39, if you want to review it, if you want to refer to it.

A. Oh, if you have -- yeah. So I have -- I have reviewed it, yes.

Q. Did you review drafts of that report?
A. I don't recall, but I certainly worked with Dr. Rosen to try to assist he and his team in any way that my or my team was able.
Q. Did you have an understanding that there were times where you were assisting him in helping him develop his analysis and his report?
MR. ARNOLD: Objection, form.
A. I'm sorry. Can you ask again, please?
Q. (BY MR. MANNIX:) Yeah. I'm trying to understand. You had conversations with him, your team had conversations with him. Did you understand that a purpose of the conversations between you and Dr. Rosen or your team and Dr. Rosen was to help him develop his analysis and prepare his report?
A. I mean, ultimately, Dr. Rosen is responsible for his report, just like I'm responsible for mine. But my effort in any call with anybody, including being here today, is to try to be helpful and communicate and provide the information that I can.
So I don't know if that answers your question. But in speaking with Dr. Rosen or his

team, my effort would be to try to assist him if he has any questions.

Q. Did you have an understanding, when you had your discussions with him, that his -- one of his end goals was to finalize a report that was to be produced in this litigation?

A. Yes, I did.

Q. And did you understand, when you had your conversations with him, that he was -- you were expecting him to take the information, the helpful information you were providing, however you were helping, to assist him in developing and finalizing that report?

A. Well, I mean, broadly speaking, I don't think I would be speaking with him about much other than issues relevant to his work or my work with respect to opioid litigation.

So I think, broadly speaking, all of the exchange was, in some sense, an effort to -- to provide any -- any helpful feedback or reactions or comments or thoughts regarding the opioid epidemic and our work in litigation.

Q. Did you or your team send to him any draft reports of your report before your report was finalized?

A. I don't know.
Q. Did you prepare draft versions of your report?
A. Well, anything prior to the final would be a draft, so I don't know what you mean by "prepare." But I certainly had a working copy of the report prior to having a final copy of the report.
Q. Okay. And were those circulated to anyone, Harvey Rosen or anyone else?
A. I don't know. I did not -- I don't recall having provided a copy of my report to Mr. Rosen.
Q. Do you recall circulating a copy of any draft reports to anyone else?
A. Well, I think it's likely that I sent -- I or my team sent a copy, a draft of our report, to Mr. Arnold or one of his colleagues at Motley Rice.
MR. ARNOLD: Counsel, we've been going for over an hour. If now or sometime soon would be a convenient time to take a break, we would appreciate it.
MR. MANNIX: I'm always up for just stopping for breaks. I was planning on going until

10:45. I'd like to take one break and go to 12:30 and then take lunch.

We can break now and then try to proceed accordingly. If we can go till -- can I do one more line of questioning? It's not all that --

MR. ARNOLD: Well, Dr. Alexander, do you want to go another ten minutes --

A. Yeah. That would be fine. Thank you. I think that sounds great.

MR. MANNIX: Okay. Thanks. And then our court reporter, videographer, speak up if you disagree. I'm just trying to keep to a workable schedule that I developed. And if anyone wants to comment, please do.

Q. (BY MR. MANNIX:) Dr. Alexander, you indicated -- you talked about Kim Frasier and April Caraway and Lauren Thorp a little earlier. And these are what you refer to as stakeholders, local stakeholders, who you did speak to; is that right?

A. Yes, it is.

Q. Okay. And in your report, those are the ones you identified as the individuals from Lake and Trumbull County who you personally spoke to.

Is there anyone else, as you sit here

today, who you spoke to in a similar fashion as you did to April Caraway, Lauren Thorp and Kim Frasier from Lake and Trumbull County to gain information?

A. I don't believe so.

Q. Let's talk a little bit about these -- I don't know if they're personal meetings or Zoom calls or phone calls.

Let's talk about Kim Frasier first. Did you meet with her personally? Did you have a Zoom call with her? Did you talk to her on the phone? What was the context of your discussion with her?

A. I believe it was a phone call, at least for me.

Q. Okay. Was it one phone call or several phone calls with Kim Frasier?

A. I don't recall. I believe it was one call. It may have been two different times that we engaged, but it was certainly -- there was certainly one.

Q. Whether it was one or two combined, how long did you speak with Kim Frasier?

A. Well, again, I don't recall if there was a second call or not. I believe the first call was about fifty -- forty-five to fifty minutes.

Q. If you had a second call, was it shorter than that, or do you think it could have been similar?

A. Probably similar duration, if there was a second call.

Q. All right. So you spoke to her somewhere between forty-five minutes and an hour and a half; is that fair, whether it's one or two calls?

A. Well, if they were both fifty minutes, I guess it would have been an hour and forty minutes, but that's correct.

Q. Okay. Somewhere in that range.

Do you know when those were held?

A. I do not. I mean, within the past, you know, four months, but I don't know the precise date.

Q. It was in 2021, you think?

A. Yes, I do believe so.

Q. Who else was on that call, besides you and Kim Frasier?

A. Yeah. I don't recall for sure, but my guess is Katherine Ozenberger, who's a colleague of mine at Monument Analytics. Last name O-Z-E-N-B-E-R-G-E-R.

Elena Fernandez. First name E-L-E-N-A, and last name F-E-R-N-A-N-D-E-Z.

Possibly Omar Mansour. First name O-M-A-R, last name M-A-N-S-O-U-R. I believe Mr. Arnold would have been there. I believe Mr. Frank Gallucci may have been on the call. And a co-counsel or colleague of Mr. Gallucci's -- first name is Sal, and I apologize, but I don't recall the last name.

But those would be the main colleagues of mine from Monument Analytics and the main counsel that I believe may have been present.

Q. Okay. And so if I understand, it was Kim Frasier, you and individuals from your team and individuals from plaintiff's counsel's firm, correct?

A. Correct.

Q. And then what was the -- what were you attempting to obtain -- what information were you trying to obtain from Kim Frasier?

A. Well, these calls are very helpful because they allow for -- you know, I spoke earlier about triangulation. And this is an example where these types of calls allow for me to triangulate information that I am hearing or reading about or,

you know, taking in from varied sources, and to get -- to get a perspective from someone that has day-to-day boots on the ground.

And so we spoke about a large number of matters relevant to, in Kim's case, the activities within Lake County that are relevant to this case.

Q. Do you recall who suggested you meet with her? Did you identify her as someone you wanted to speak to, or did someone else identified her as someone you should speak to?

A. I think there -- she was a natural. I don't recall specifically, but she was a natural because of -- because of her position as executive director of the Lake County Board of Alcohol, Drug Addiction and Mental Health Services.

Q. Did you maintain -- take and maintain any notes related to that meeting?

A. I don't believe that I did. I believe one of these calls I may have. And I believe for two of them, while typically it's my practice to maintain notes, I believe for two of these I was driving and did not take notes personally.

Q. Do you know if anyone on your team

took notes?
A. I do not.
Q. How about Lauren Thorp, how many times did you meet with her?
A. I believe, one.
Q. Excuse me, I include telephone calls, Zoom calls.
A. Right. Right.
Q. Personal meetings.
A. Yeah. I believe once.
Q. Was that a phone call, Zoom call, personal meeting?
A. Again, I believe it was either phone or Zoom. I do not recall.
Q. Did that happen in 2021?
A. Yes. I believe it did.
Q. And was it a similar situation where there was -- Lauren Thorp, other people from your team, as well as representatives from plaintiff's counsel?
A. Yes, I believe so.
Q. What, specifically, were you attempting to obtain, what information were you seeking to obtain from Lauren Thorp?
A. Well, as director of recovery and

youth programs at the Trumbull County Mental Health and Recovery Board, I believe that Ms. Thorp has a valuable perspective to offer regarding the activities that the Mental Health and Recovery Board has taken, many of which have been undertaken through the ASAP Coalition, to try to reduce opioid-related morbidity and mortality.

Q. Did you maintain any notes from that meeting?

A. I don't believe that I did.

Q. Was it your testimony that you thought two of these -- well, I guess there might have been more than one time.

Do you know if that call with Lauren Thorp was in your car, or could have been in your office, or do you recall where you were when you were taking that call or Zoom?

A. I don't recall. Again, I believe that one of these -- in speaking with one of these three individuals, I believe that I may have taken some notes. And in speaking with the other two, at least one of those conversations, I believe I was in a car and not in a position to take notes.

Q. And then April Caraway, how many times did you meet with her, personally or Zoom or

over the phone?

A. I believe -- I believe once.

Q. Approximately how long was that call?

A. I don't recall.

Q. Would it have been similar to what we talked about with Kim Frasier, somewhere between forty-five minutes and fifty minutes, less or more?

A. Yeah. I mean, typically, I like to speak with these types of individuals for -- until, you know, at least as long as I feel like allows for me to get a good sense of their perspective on the opioid epidemic and the abatement efforts to date within their communities. And so I don't know the precise duration of the call. But I can tell you that I felt comfortable, based on the calls and based on my -- the totality of evidence that I reviewed, that I was able to develop what I feel is a comprehensive and evidence-based and fit-for-purpose abatement plan within Lake and Trumbull Counties.

Q. When you met with these individuals, did you seek to obtain information or did you ask them to talk to other individuals prior to the call or Zoom call with you?

A. That, I didn't -- I mean, you -- you

asked if when I met with them, I asked them to speak --

Q. Yeah, let me back up.

A. -- or if they spoke with people before? I didn't understand the question.

Q. When the call was being set up with them, and they were aware that a call was being held in a week or however long it was, do you know if there was a request made of them to obtain additional insider information, from other specific individuals at Lake or Trumbull County, so that they could relay to you information from those individuals, or was it simply a meeting with them to understand what they knew based on their experience and personal knowledge?

A. I mean, these calls were one of dozens, or I suppose, to speak literally, hundreds of sources of inputs that I used in order to understand the experience on the ground in these communities, and including reports such as community health improvement plans and the HUB report in Lake County. Reports that have been generated by the counties, by the types of individuals that you're speaking about.

So at no point in preparing this

report did I feel -- did I have concern that I lacked access to the information that I needed to develop a comprehensive and evidence-based abatement plan.

Q. Yeah, I don't think that was responsive to my question at all.

My question was whether you know, one way or the other, whether Lauren Thorp, Kim Frasier, April Caraway, in preparation for the meeting or call with you, whether they were asked to speak to other people so that they could convey information obtained from those individuals to you when the meeting was held or the phone call was held with you.

Do you know one way or the other whether that was asked of them and whether they did that?

A. I'm not aware of whether -- I'm not aware of the preparatory -- I'm not aware of the preparation that these individuals performed in advance of the call that I had with them.

Q. Were they asked to -- did they bring specific documents to the meeting, or provide you specific documents during the meeting?

A. During the -- one of the things that

I like to be sure about and used these calls for is to be sure that I have reviewed the most relevant documents to the case.

And so, typically, I will discuss with local experts what materials they believe are most valuable in allowing for me to get as good a sense as I can of the experience on the ground.

MR. MANNIX: We're a little past 10:45, so we can take a break now, and we'll come back and discuss this and some other things after that.

What do we want to say, right at 11:00?

A. That's fine. That's fine.

MR. MANNIX: Okay.

THE VIDEOGRAPHER: Okay. We're off the record, 10:48.

A. Thank you.

(Whereupon, a break was had from 10:48 a.m. until 11:03 a.m. EDT)

THE VIDEOGRAPHER: We are back on the record at 11:03.

(Exhibit 10 was marked for identification.)

Q. (BY MR. MANNIX:) Dr. Alexander,

we've returned from break. Let me have you turn to Exhibit 10.

A. Okay.

Q. Do you have that -- let me know when you have that in front of you.

A. Yes, I do.

Q. Okay. This is -- does this appear to be a report that you prepared in another case, the case brought by Cabell County and the City of Huntington in West Virginia?

A. Yes, it does.

Q. And were you asked to provide opinions in that case on abatement strategies, similar to what you were in this case?

A. Well, I wasn't asked to focus on any specific strategies, but I was asked to develop, in a similar manner, a comprehensive and evidence-based abatement plan, yes.

Q. Did you attempt to conduct an analysis in that case similar to the analysis you did in this case?

A. Well, the general scientific process is similar, yes. But there are, you know, big differences between these communities as well.

Q. Understood. But as you said, the

scientific process that you undertook was the same, right?

A. Similar. I mean, these are -- these are dynamic plans. And my information is provided at a single point in time for each of these communities. But, yes, the general underlying process is similar.

Q. And you -- in those communities, did you attempt to understand and then describe the opioid problem existing in those communities as you attempted to do so in this case?

A. Yes, I did.

Q. And you spoke to individuals there, correct; is that right?

A. Yes, I believe I did.

Q. If you look at Page 6 of this report, you've identified stakeholders in those communities; is that right?

A. Yes, that's correct.

Q. And I've counted, there's twenty-one individuals that you identify in those communities.

Does that look approximately correct?

You're free to count them. But I'll represent to you I've counted them as twenty-one.

And really the question I have to you

is: Recognizing there's many more people that you spoke to in those communities than you have in Trumbull and Lake County as stakeholders and referenced in your report, is there a reason why you spoke to only three in Lake and Trumbull and spoke to twenty-one in West Virginia, in the West Virginia case?

A. Well, these individuals are one of many sources of information that I used to generate my report. And so, you know, my typical process is to speak with people in order to learn as much as I can and ensure that what I've learned from other sources is consistent with what I'm hearing from individuals.

Q. Okay. But you spoke to people in many different departments in West Virginia, while in this case you spoke to the three individuals you identified, correct?

A. That's correct. The individuals that I spoke with in this case were individuals that had a broad view of the landscape and were able to provide me with valuable information to supplement the information that I got from other sources.

Some of the individuals that I spoke with in -- in Cabell County in the City of

Huntington, while helpful, were able -- provide -- provided me with a much more narrow, you know, slice of the waterfront, if you will.

Q. With respect to your report, obviously, there's -- I want to talk a little more directly about your report, your analysis in Track 3.

You use the word "opioid" throughout, obviously. So we're on the same page, what is your meaning? When you use the word "opioid," what is your understanding? What are you attempting to convey with that word, with that term?

A. It depends.

Q. Okay. What does it depend on?

A. It depends on the context.

Q. Okay. What do you mean by "nonprescription opioid"?

A. Typically -- I'm sorry. Go ahead.

Q. No, what does that entail? Go ahead. You were speaking.

A. Typically, by "nonprescription opioid," I mean an opioid -- well, it depends on whether -- I'm sorry, but I want to be sure not to confuse matters regarding nonmedical use, which is a separate term that we can discuss, and

nonprescription opioid. But by "nonprescription opioid," typically, I mean opioids such as heroin or illicit fentanyl.

Q. Okay. Well, you reference "nonmedical use," what do you mean by that term?

A. "Nonmedical use"? As with the standard definitions that are used, you know, in national service and otherwise generally, I use that to refer to use of a product for a purpose or in a way other than for which it's been prescribed.

Q. And when you use the term "prescription opioid," what is meant by that term?

A. I believe -- if -- I'd like to look at my report. I believe, in my report, I discuss some of these terms and their definitions, so it would be helpful to refer you -- I'd like to refer you to that point in my -- that place in my report.

Q. Okay. And that -- the report is right in front of you, so feel free to look at your report as we go through these questions. You can do that.

A. Okay. So I think, in Footnote A on Page 3 of my report, I refer to Dr. Anna Lembke's report for definitions of terms such as "opioid use disorder," "addiction," "nonopioid medical use and

misuse."

Q. So you would have to refer to her report to understand what you mean by those terms? Is that --

A. No, that's -- no, that's not true.

Q. Okay. My question was earlier, when you used the term "prescription opioid," what do you mean by that?

A. It depends on the context.

Q. Okay. What does it depend on? What do you mean "it depends on the context"? What -- what are the different meanings it can have? When you use it, what are you referring to?

A. Can we look at an instance where I used that term in my report?

Q. If you're saying, sir, every time you use it, it may mean something different? Or do you have a standard meaning when you use the word "prescription opioids"? I understand that there may be something refined, but is there a broad category or definition that you -- it falls into when you use the word "prescription opioids" in your report? Or can we give it no meaning at all?

Are you saying that when you use the word "prescription opioids," it varies -- the

meaning of that varies throughout your report?

A. Again, it would be helpful to look at a specific context. If you're asking about how I intended a specific -- how -- what I intended a specific word to mean.

Q. No. I'm fine with that answer. As I understand, it varies depending on what sentence, what page we're referring to. That's fine.

When you use the word "opioid use disorder," what is meant by that term?

A. I generally use that synonymously with opioid addiction. And as I describe in my report, I provide a reference to the expert report of Dr. Anna Lembke with respect to definitions of these terms.

Q. Okay. So we should look to her report if we want to understand your definition of those terms?

A. Well, I think -- I think -- I haven't matched up every time she uses the word and every time I use the word. But I think that our reports and language and use of these terms is well aligned, because we both practice clinically, and we both see people with addiction and treat addiction.

(Exhibit 20 was marked for identification.)

Q. (BY MR. MANNIX:) I'm going to have you turn to Exhibit 20.

Do you have that in front of you? Let me know when you have it in front of you.

A. I do.

Q. This is -- correct me if I'm wrong. This is an article that you coauthored; is that right?

A. Yes, it is.

Q. Okay. And it was published -- what year was this published in, 2020; is that right?

A. It looks to be, yes.

Q. Okay. And do you agree with the statements in this article?

A. Just one minute, please.

At the time the article was written, I believe that the article represents my views and perspectives on the matters at hand, yes.

Q. If you look at the -- down to the introduction, first page, middle of the page says, "Introduction." Do you see that?

A. Yes, I do.

Q. Could you read the first sentence

into the record?

A. "The overdose crisis in the United States has typically been described as an opioid overdose epidemic consisting of three waves, with morbidity and mortality accounting for -- accounted for predominantly by prescription opioids, 1999 to 2010; heroin 2010 to 2013; and illicit fentanyl and other synthetic opioids, 2014 to present."

Q. Now, that's -- that was your position in 2020, correct?

A. Yeah. At the time that we submitted this for publication, it was my position that the -- that the overdose crisis has typically been framed as having three waves, yes.

Q. Has that position changed? Do you think differently now? Or do you maintain that position now?

A. Well, I mean, I think it's important to understand what -- what is and isn't meant by this. So I'm not suggesting that many people aren't still dying from prescription opioids. And I'm not suggesting that nobody died from illicit opioids in the year 2002.

But, yes, I still believe that the opioid epidemic is typically characterized as

having had three waves.

Q. As described in the sentence you just read, correct?

A. Yes, that's correct.

Q. And then can you read the next sentence that begins "between" down to the words "efforts" -- or the word "efforts" in the Footnote 4? Could you read that into the record?

A. Sure.

"Between 1999 and 2010, the volume of prescription opioids distributed in the United States increased four fold, corresponding with an approximate four fold increase in the rate of fatal overdoses involving prescription opioids.

"Deaths involving prescription opioids plateaued in 2010 to 2013, rose modestly until 2016-2017, and declined in 2018 attributable to both reduced opioid prescribing and other prevention, treatment and recovery efforts."

Q. And is that the statement that you stand by today, as describing --

A. Well --

Q. -- on some level, the first wave?

A. I'm sorry. I believe I interrupted you. Can you please ask your question again?

Q. Yeah. I just want to know. You said this was your view back in 2020, suggesting that some of your views may have changed. I don't know if they did or not. I just want to know if you stand by that statement as generally descriptive of the first wave of the opioid epidemic?

MR. ARNOLD: Objection. Misstates testimony.

A. Yeah. I'm not speaking here only to the first wave. And if I were speaking today, as I am, I would feel compelled to mention the coronavirus pandemic and that deaths from overdoses in many communities have never been higher than they are currently.

Q. Okay. If -- is there something about this statement that you think is incorrect that you just read into the record?

A. No.

Q. Is your article incorrect as it stands today, yes or no?

A. My article or that statement?

Q. That statement.

A. No, I do not believe there's anything incorrect about that statement.

Q. Okay. And then can you read the next

sentence into the record?

A. "Beginning in 2010, largely as a result of increased geographic availability of historically low cost, high purity heroin and increased demand for opioids, overdose deaths from heroin began to rapidly increase."

Q. Is there anything incorrect about that statement?

A. Again, I think all of these things have to be --

Q. Is there anything incorrect about that statement?

MR. ARNOLD: Objection. You have to let him finish his answer.

MR. MANNIX: This is not anything other than a yes-or-no question.

MR. ARNOLD: It's not a multiple choice test. I think he gets to answer the question.

Q. (BY MR. MANNIX:) Is there anything incorrect about that statement?

Go ahead.

A. I think these statements have to be taken into context. And the context of these statements is understanding the genesis of

opioid-related morbidity and mortality.

And in the case of this paper, also understanding nonopioid morbidity and mortality.

Q. Dr. Alexander, do you stand by that statement you just read into the record?

A. I think that -- again, I think that the typical characterization of the opioid epidemic in three waves is not terribly controversial. But I think it's important to understand the interrelationship between the oversupply of prescription opioids that -- that predominated over everything else early in the opioid epidemic, and the subsequent increase in heroin and illicit fentanyl use that we've seen more recently.

Q. You published this in 2020. Are you now backtracking and taking the position that that statement you just read into the record is incorrect? Is that what you're doing?

A. I think that there are serious -- serious challenges with heroin and illicit fentanyl, there's no question.

And one important process or part of understanding those challenges is understanding the interrelationships of prescription opioid oversupply on the one hand, and heroin and fentanyl

morbidity and mortality on the other.

Q. Are you willing to stand by that statement, as you sit here today?

And I'll read it back for the record if you need me to, but you read it.

Do you stand by that statement or not?

A. I think that the increased demand for opioids, of which the oversupply of prescription opioids, which was fueled by the oversupply of prescription opioids, has driven increases in heroin and illicit fentanyl use.

Q. What's incorrect about that statement?

A. I mean, what I'm providing you with is context for that -- for that statement.

Q. I'm not asking you for context. I'm asking you what's incorrect about that statement?

A. I think that statement accurately reflects one element of the opioid epidemic, which has been that following the vast oversupply of prescription opioids and the predominant prescription opioid deaths early in the opioid epidemic, we've seen increases in deaths from heroin and subsequently illicit fentanyl.

Q. Go ahead and read the next sentence into the record.

A. "Then, in 2013, coincident with the rapid increase of illicitly-made fentanyl and fentanyl analogs, including the extremely potent analog carfentanil in the U.S. drug supply, there was a near exponential increase in overdose deaths involving fentanyl and other synthetic opioids, with the rate of overdose deaths increasing" -- I'm sorry -- "with the rate of overdose deaths involving these drugs increasing eight hundred and ninety percent, from 1.0 per hundred thousand person in 2013 to 9.9 in 2018."

Q. Is that a correct statement or incorrect statement, as you sit here today?

A. Again, if I were discussing the waves of the opioid epidemic today, I would highlight these three waves. And then I would discuss the issues with respect to the pandemic and more recent evidence of greater morbidity and mortality in many communities than ever before.

Q. Okay. So you can't point out anything in that particular statement that's incorrect, you would just add additional information; is that right?

A. I think that statement accurately captures some of the challenges of the opioid epidemic, which include significant morbidity and mortality from illicit fentanyl.

Q. Have you prescribed opioids in your practice?

A. Yes, I have.

Q. When you have written a prescription for any drug, do you expect a pharmacy to fill it?

A. No, I do not. Not necessarily.

Q. If the pharmacy calls and you confirm that the prescription was intended for the patient, do you expect it to be filled?

MR. ARNOLD: Objection, form.

A. Not necessarily.

Q. (BY MR. MANNIX:) If pills are later stolen from the patient after it's dispensed, the patient -- an opioid prescription that you've written and was dispensed, do you consider that to be your fault?

MR. ARNOLD: Objection, form.

A. I mean, there are -- I would certainly be interested and concerned and do anything and -- I mean, do everything within my power to prevent that type of occurrence from

happening.

Q. (BY MR. MANNIX:) So it's possible that you would consider it your fault, if you wrote a prescription for somebody for opioids, believing that that was the right thing to do based on their medical history and their condition, it was dispensed and it was stolen, that could potentially be your fault as far as --

A. It depends. It depends.

Q. Has that happened to you, where you've looked back -- that's happened and you've said, "That was my fault"?

MR. ARNOLD: Objection, form.

A. Well, that -- that seems to imply that it's happened.

Can you ask the question again?

Q. (BY MR. MANNIX:) That's what I'm asking. Is it a situation where, you know, you prescribed opioids, it was dispensed, and it was stolen by somebody else, and you came to the conclusion that that was your fault? Has that happened?

A. No, it has not.

Q. In this case, you were asked to provide your expert analysis and opinions in this

matter, right?

A. In which matter?

Q. In the matter related to Lake and Trumbull.

Or do you think we're still on West Virginia?

We're talking about Lake and Trumbull Counties, the litigation in Lake and Trumbull Counties.

Were you asked to provide an expert analysis and an opinion related to Lake and Trumbull Counties?

MR. ARNOLD: Objection, form.

A. I mean, I think I was responding -- I think "matter" may be a legal term of art, and I just am not clear on what "this matter" means.

But if you're asking whether I was asked to provide an opinion as to what scientifically-based comprehensive and coordinated actions could be taken by Lake and Trumbull Counties to reduce further harms from the opioid epidemic in their communities, yes, that's what I was asked to do, as well as to identify the specific populations eligible for specific services.

Q. (BY MR. MANNIX:) So what you just described there was what you were asked to do and what you attempted to do, right?

A. Yes. I mean, as I'm speaking, it occurs to me, I believe there's an Appendix D or E, there's an additional appendix that speaks to the use of indicators or flags. And so we can come to that. But that was an additional request. But I think those govern sort of the totality of requests that were made of me.

There were some instances where I was asked to provide specific estimates of medical costs. And those are included in my redress report or redress model.

So I think that captures the totality of what I was asked to do.

Q. Were you asked to provide your best judgment about what actions and interventions should be employed to abate the opioid epidemic in Lake and Trumbull County?

A. Yes, I was.

Q. What is the goal of the abatement plan that's included in your report, the summary in your report in the redress models?

A. I mean, it's to be sure there's never

another child that wakes up without her mom or dad the next day. I mean, it is to reduce the pain and suffering and heartache that opioids have caused for so many individuals within these communities.

It's to, you know, help ensure that individuals with chronic pain are well managed and managed according to best practices.

You know, it's to ensure that police officers and detectives have the resources that they need to -- to help get people in treatment that are nonviolent criminal offenders, and to divert people from the criminal justice to the treatment system and so on and so forth.

I mean, at the end of the day, it's about improving the lives of the citizens of Lake and Trumbull County.

Q. Is your goal to completely eliminate the opioid-related injuries, addictions and death in Lake and Trumbull County?

A. I don't have as a goal a specific, you know, quantitative threshold of zero or two or fourteen or something with respect to my goal. I mean, I just told you in broad form my goal, which is to -- to be sure that no one ever wakes up again without a parent from a fatal overdose; that

individuals in high school or middle school aren't running into trouble with opioids that have been oversupplied and that are circulating through -- you know, through schools and after school clubs and elsewhere and so on and so forth.

Q. But you don't have specific numbers as to what percentage of reduction or what numerical percentage you would put on that reduction in Lake and Trumbull County; is that right?

A. I'm sorry. You said I would "put on," and I guess I don't understand the question.

Q. Yeah. That's not a great term. Do you have an understanding as to the percentage reduction of opioid problems that would be achieved if your abatement program would be put in place in Lake and Trumbull County?

A. Yes, I do.

Q. And what is that specific reduction? Percentage?

A. I'd like to review my redress models to point you to that information.

Q. Okay. Where are those found in your redress models?

A. Well, let's take Exhibit 3, which is

for Lake County.

(Exhibit 3 was marked for identification.)

A. And Page 2. And it looks as if it's cut off. So let's see if it's different for this one. It's not. So both of these are cut off.

So could we get a complete version of the report, please?

Q. (BY MR. MANNIX:) This is the -- what page is it on Trumbull County?

(Exhibit 4 was marked for identification.)

A. Page 2 of either Exhibit 3 or Exhibit 4. But I'd like to be able to see the electronic version, please.

Q. (BY MR. MANNIX:) On Page 3. Let's do this if we can: I'll come back to that after lunch and we can address that line of questioning.

A. Okay.

Q. Put a flag on that. I'll be able to get those electronically, knowing what pages you're talking about.

A. I mean, I can look it up quickly, if you'd like, on my computer. But that would require me to look at a nonformal exhibit, so maybe that's

not permitted.

Q. Yeah. Let's just -- we'll go through the process. I think I can bring those up electronically --

A. Okay.

Q. -- probably after the break, lunch break.

With respect to the defendants in this case, do you understand who the defendants are in this matter?

A. I believe I have a broad understanding.

Q. And what is your understanding?

A. I believe they are typically pharmacies or distributors that act as -- in some capacity as, you know, pharmacies in the supply chain.

Q. Is it your understanding that the defendants in this case, Track 3, are different than or do not include all of the defendants that were involved in the other cases where you provided expert services as listed in Appendix C of your report?

A. I'm not -- I don't -- setting aside whether Appendix C was where that information was

listed, the answer to your question is yes, it's my understanding that the defendants in this case may overlap with, but are not comprehensive of all of the defendants that have been -- had claims made against them in the other opioid litigation.

Q. Do you understand what types of defendants or categories -- you said primary -- in this case pharmacy and distributors.

Do you understand that the other cases involved manufacturers or other types of entities?

A. Yes, I do.

Q. And what other type of entities do you understand those other cases involved included?

A. Well, I believe most of the litigation has focused on cases against manufacturers, distributors and pharmacies.

Q. With the manufacturers that were involved in those other cases, did you have a position of whether those entities should be held responsible for paying for the abatement plans that you proposed in those cases, those other cases?

A. No, I did not.

Q. Does your model assume that, in this case, the retail chain pharmacy defendants are

responsible for the abatement costs in Lake and Trumbull County?

A. I wasn't asked to assign responsibility in my case. I was asked to develop comprehensive and evidence-based abatement plans. But I can tell you that, based on my ten to fifteen years and dozens of analyses of these matters and close read of the opioid epidemic, I believe that one important driver of the epidemic has been the oversupply of prescription opioids within Lake and Trumbull County.

Q. Were you asked to identify any specific wrongdoing by any of the defendant pharmacies?

A. I was asked to develop an evidence-based abatement plan. And that didn't require me to identify wrongdoing by a specific pharmacy.

Q. Are you offering opinions as to who caused the opioid epidemic and the harms identified in Lake and Trumbull County?

A. Again, I was asked to develop a comprehensive and evidence-based abatement plan. And that didn't require me to identify the precise cause of the opioid epidemic in Lake and Trumbull

Counties.

Q. And you're not offering an opinion as to who should pay the costs for your proposed abatement program in this case; is that correct?

A. I was asked to develop an evidence-based and comprehensive abatement plan, which is what I did. And that didn't require me to assign costs to particular parties.

Q. Would you agree that your report does not identify any causal connection between the defendant pharmacies' conduct and any specific harm you have identified in your report?

A. My recommendations for how to reduce opioid-related morbidity and mortality didn't require me to identify causal connections between specific parties and the harms that have occurred in Lake and Trumbull Counties.

Q. Is your abatement program set up to address the problems with the opioid epidemic in Lake and Trumbull County?

A. Yes. Yes, it is.

Q. Is it set up to address the problems with prescription opioids that are found in Lake and Trumbull County?

A. Which problems are you referring to?

Q. Well, let me ask it this way: You talked about the three waves of the opioid epidemic earlier, correct?

A. Yes.

Q. And I assume the article -- and you can look at it -- was that a nationally-based article in your description of the three waves of the opioid epidemic? It wasn't particular to a specific community or state; is that right?

A. Correct. It was a systematic review. But, again, it's not as if when Wave 2 comes along, Wave 1 is suddenly no longer relevant. I mean, these are -- I describe, in my report, that there are still people this -- you know, this very year, that are dying in Lake and Trumbull County because of prescription opioids.

So it's not as if -- so I think it's important to emphasize that the waves refer to broad classifications of morbidity over time, but should not be taken to the final story, or that they -- these waves are mutually exclusive, and there's no continuing morbidity from -- you know, that there was no morbidity from heroin before 2010. That's simply not true.

Q. Yeah. I'm not sure how that, in any

way, was responsive to my question. The question was: Would you agree with me your article was based on a national perspective, as opposed to a community or state-specific analysis?

A. Yes. The article that you're referencing, I believe, which is Exhibit 20 --

Q. 20, uh-huh.

A. -- is a systematic review. And so it provides a broad review of the landscape.

Q. All right. Do you agree that the -- understanding your -- how you're qualifying the description of the three waves, do you understand that the three waves of the opioid epidemic that you've described in your article generally evolved in that fashion in Ohio?

A. Well, I would like to refer to my report. If there's a -- there's a complete section of my report called "indicia" that speaks specifically to the morbidity and mortality for prescription opioids and nonprescription opioids over time in these communities. So it would be helpful to review that with you.

Q. Yeah. Well, you can refer to your report. I don't want -- I can read your report. I don't want you to just reiterate what's in your

report. I'm just asking, yes or no -- and you can refer to your report -- if the opioid epidemic in Ohio evolved in a three-wave fashion as you describe in your article?

A. I believe that it did. For example, on Paragraph 21, the first sentence I write, "As observed nationally and within Ohio, there was first a rise in prescription opioid-related deaths in the early 2000s, followed by a rapid increase in heroin overdose deaths beginning in 2010, and a sharp increase in fentanyl overdose deaths in 2016."

But I go on to talk about the clear link between the nonmedical use of prescription opioids, and subsequent heroin or illicit fentanyl use. And I also go on to say, for example, that based on Ohio data, that nearly ninety percent of participants used prescription opioids prior to initiating heroin.

And so --

Q. We'll talk about those statements in a second.

What I'm trying to confirm, and I think you said you agree, that the three waves of the opioid epidemic were national evolution, and it

also generally applied to Ohio.

Did -- does that also apply to what happened in Lake and Trumbull County, that there generally were -- or was a three-wave evolution of the opioid epidemic in Lake and Trumbull County? Would you agree with that?

MR. ARNOLD: Objection, form.

A. Can you ask the question once more, please?

Q. (BY MR. MANNIX:) Yeah. Do you generally agree that there's a three-wave evolution of the opioid epidemic in Lake and Trumbull County, as there was nationally and there was in Ohio, as you explained?

A. I believe that the broad contours of the opioid epidemic nationally have played out both within the state of Ohio, as well as within Lake and Trumbull Counties.

And that includes enormous morbidity and mortality from prescription opioids, heroin and illicit fentanyl.

Q. Okay. If you look at -- and I know you referred -- what paragraph of your report were you referring to, 21?

A. Correct.

Q. And I think you spoke about the sentence that starts, "There's a clear link between nonmedical use of prescription opioids and subsequent heroin or illicit fentanyl" --

THE REPORTER: I'm sorry. I couldn't hear you. "There's a clear link" --

Q. (BY MR. MANNIX:) -- "between nonmedical use of prescription opioids and subsequent heroin or illicit fentanyl use as heroin and fentanyl are close chemical analogs to prescription opioids."

You stated that, correct, in your report?

A. Yes. Correct.

Q. Okay. And then you have a citation.

Well, then you go on further to say, "Several studies estimate that seventy to eighty percent of the current heroin users report nonmedical prescription opioid use prior to initiating heroin," correct?

A. Yes, that's correct.

Q. And then you cite -- your first citation there, 76, is to an article written by Compton, Jones, Baldwin, "The Relationship Between Nonmedical Prescription-Opioid Use and Heroin Use."

It's in The New England Journal of Medicine.
That's your citation, correct?
A. Yes.
(Exhibit 18 was marked for identification.)
Q. (BY MR. MANNIX:) If you would turn to Exhibit 18. Let me know if that is the article that you cite.
A. Well, I believe I cite two articles there, but eight --
Q. Is this one of the articles you cite?
A. Yes, I believe this is one of the two articles that I cite.
Q. Okay. And if you go to the conclusions of this article, Page 160. It starts on 154, go to Page 160 of that article where the conclusions are.
Are you at that section?
A. Yes.
Q. And under "Conclusions" it states, "Available data indicate that the nonmedical use of prescription opioids is a strong risk factor for heroin use. Yet, although the majority of current heroin users report having used prescription opioids nonmedically before they initiated heroin

use, heroin use among people who used prescription opioids for nonmedical reasons is rare, and the transition to heroin use appears to occur at a low rate."

Did I read that correctly?

A. Yes.

Q. And then it goes on further to state, "The transition from nonmedical use of prescription opioid to heroin use appears to be part of the progression of addiction and a subgroup of nonmedical users of prescription opioids, primarily among persons with frequent nonmedical use and those with prescription opioid abuse or dependence.

"Although some authors suggest that there is association between policy-driven reductions and the availability of prescription opioids and increases in the rates of heroin use, the timing of these shifts, many of which began before policies were robustly implemented, makes a causal link unlikely."

Did I read that correctly?

A. Yes.

Q. And then if you look at this article, on Page 156 there is a -- down about -- the left-hand column, about three quarters of the way

down, it talks about an article written by a Muhuri.

Are you familiar with Dr. Muhuri?

A. With the doctor him or herself? How do you spell the last name?

Q. M-U-H-U-R-I. If you don't know, that's fine.

It says, "Similarly, Muhuri, et al., found that the incidence of heroin use among people who reported prior nonmedical use was nineteen times as high as incidents among persons who reported no previous nonmedical use."

A. I'm sorry. What page are you on?

Q. Well, let me -- I am on Page 156. I'm sorry. I thought you were following along with me.

A. No. I thought you said 157. I may have misunderstood you.

Q. Okay.

A. So where on Page 156?

Q. If you look down at -- about three quarters of the way down, there's a footnote, Footnote 28. Do you see that?

A. Oh, I see it. Yes. Yes, I do.

Q. And then if you look at -- back to

the citations, there's a citation to an article written by Muhuri --

A. Uh-huh.

Q. -- I can't pronounce the other, and Davies, called the "Associations of Nonmedical Pain Reliever Use and Initiation of Heroin Use in the United States."

(Exhibit 38 was marked for identification.)

Q. (BY MR. MANNIX:) If you could turn to Exhibit 38. That was in the second package that came yesterday.

Let me know when you have 38.

A. Okay.

Q. This -- in the Abstract, it states that, "This study examines the recent trends in the heroin initiation, including the role of nonmedical prescription pain reliever use in the heroin trend among persons age twelve to forty-nine."

Do you see that sentence?

A. Uh-huh.

Q. Second sentence?

A. Yes.

Q. And in the second-to-last sentence, it says, "However, the vast majority of nonmedical

NMPR users," nonmedical prescription pain reliever users, "have not progressed to heroin use. Only 3.6 percent of NPR -- NMPR initiates had initiated heroin use within the five-year period following first NMPR use."

Do you see that? Do you see that sentence?

A. Yes.

Q. Okay. So we have the conclusion that I read earlier from the Compton article stating that, although some authors suggest, "There is an association between policy-driven reductions and the availability of prescription opioids and increases in the rates of heroin use, the timing of these shifts, many of which began before policies were robustly implemented, makes a causal link unlikely."

And then we have this other article that I just mentioned that shows that this study, Exhibit 38, "The vast majority of NMPR users have not progressed to heroin use. Only 3.6 percent of MPR [sic] initiates have initiated heroin within the five-year period following first NMPR use."

Have you conducted any published studies that you believe disprove the conclusions

in these two articles, The New England Medical Journal and the other article I referred you to, Exhibit 38?

A. I mean, I'm a little bit -- I had a little bit of a hard time following. I think I followed, but -- but, you know --

MR. ARNOLD: Sorry. I was muted. I had an objection to form.

Go ahead, Dr. Alexander.

A. Okay. I had a little bit of a hard time following, you know, the things that you were weaving together.

But what I can tell you, first, I would point out that the Compton piece was published more than five years ago, I believe. And the Muhuri piece more than seven years ago. And a lot has happened since that time.

The second point I would make is that the Compton piece was one of two references to support an assertion that I made in my report that I'd be happy to discuss further.

Now, specifically, having said that and having, again, pointed out that I didn't really understand the nature of your questioning, if you're asking specifically if I have conducted a

study that runs against or refutes something, can you please tell me the assertion that you're wondering whether I have refuted through my own empiric work?

Q. (BY MR. MANNIX:) Well, let's take the Compton report that's stating that there's -- the causal link between prescription opioids and the increase of heroin use is unlikely. I'm paraphrasing, but that's from the Compton report.

MR. ARNOLD: Objection.

A. That's not what the Compton article asserts. They're not talking about increases in prescription opioids and subsequent transitions to heroin. They're talking about the impact of, I believe -- I mean, let's look at the language again. But I believe they're talking about the impact of policy interventions to reduce prescription opioid oversupply.

And what they're speaking to is a question as to whether policy interventions to reduce prescription opioid oversupply effectively push people to heroin.

Q. (BY MR. MANNIX:) Right. And they conclude that the causal link is unlikely. Have you --

A. In 2000 -- in 2016, so more than five years ago, they wrote -- they wrote that they believe that policy-driven reductions in the availability of prescription opioids -- essentially, that they felt that the evidence to date, at that point in time, did not strongly support claims that policy-driven reductions in prescription opioids were responsible for increases in the rates of heroin use.

Q. Right. Okay. Do you -- have you done any studies to take a different position, disprove that?

A. I've looked at an enormous number of studies. I cite more than six hundred, I believe, in my report. And I speak directly in my report -- or I reference studies that my colleagues and I have done that do examine this interrelationship of prescription opioid and heroin morbidity and mortality.

Q. Okay. And what citations, that you have conducted, can you point me to exactly what citations you are referring to, that you have performed or been a part of?

A. Yes. Please give me one minute to review my report.

(Pause.)

A. So Reference 27 in my report is to a paper entitled "Modeling Mitigation Strategies to Reduce Opioid-Related Morbidity and Mortality in the U.S." that was published in the JAMA Network.

And that -- that is an example of a study that I have done that builds upon evidence regarding the interrelationships of prescription opioid and heroin morbidity and mortality.

Q. (BY MR. MANNIX:) Okay. Anything else? Any other studies that you have performed?

A. Well, again, I would have to -- I don't recall -- I would have to look through the papers more carefully. While I don't believe that I've directly modeled these interrelationships, I believe that other work that I've published has been predicated upon my understanding -- review and understanding of the comprehensive literature examining these important associations.

Q. You recognize that Lake and Trumbull Counties have taken steps to address the opioid crisis, correct?

A. Yes.

Q. And do you think that some of the things that the Lake and Trumbull Counties have

been doing have been beneficial?

A. Yes, I do.

Q. Do you think that some of the things that they've been doing that are beneficial, if they had started earlier, would have had a positive impact sooner than what was experienced due to the fact that they started at a later date?

MR. ARNOLD: Objection, form.

A. I think the counties have done the best with what they've had. And I think there's an enormous amount of work still to do. And I hope that my -- my proposed abatement plan assists them in this undertaking.

Q. (BY MR. MANNIX:) And you said "what they had," right? What do you mean by what they had? Are you talking finances, or are you talking about individuals, or are you talking personnel? I just didn't know when you said "what they had," what you were referring to.

A. Well, I believe that there's not a county in the country that hasn't been impacted in some way, or that hasn't faced resource constraints in their efforts to address the opioid epidemic.

And so I believe that Lake and Trumbull County have done the best with the -- with

the resources that they've had and the, you know, economic resources and human capital that they've had to address what has been a monumental problem.

Q. Have you analyzed the money spent by Trumbull County -- I'll say Trumbull first -- Trumbull County to address the opioid crisis over the last five years?

A. I was asked to develop an evidence-based abatement plan, and that didn't require me to analyze the money spent.

Q. So you haven't done that, correct? You haven't looked at the money spent, correct?

A. Again -- again, I was asked to develop an evidence-based and comprehensive abatement plan for these communities, and that didn't require me to do a detailed analysis of the money spent to date.

Q. So do you know what the average amount of money spent by Trumbull County over the past five years has been to address the opioid crisis?

A. My plan provides a comprehensive review of the scientific evidence base. And developing that plan required me to understand a lot about what Lake and Trumbull County have done.

And I performed a careful qualitative review of those efforts. But my report wasn't predicated upon having done a financial audit of the efforts to date.

Q. So you don't know what the average amount of money is that was spent by Trumbull County over the last five years, yes or no?

A. In preparing my report, I looked at a large number of materials and worked hard to understand the activities that Trumbull County has taken to date. But my report didn't require me to do a detailed financial audit to understand the amount of money that Trumbull County has spent to date.

Q. Does the same thing go for Lake County, that you have not analyzed the money that was spent by Lake County to address the opioid crisis over the past five years?

A. Well, in preparing my recommendations, I looked carefully at the activities that Lake County has conducted to date, including the development of the community health improvement plan, the HUB report, the activities of the ADAMHS Board and the Opioid Task Force.

But my abatement plan didn't require

me to do a comprehensive audit of the monies that Lake County has spent to date to address the opioid epidemic.

Q. Well, you were talking earlier about you thought that Lake and Trumbull County have done -- I'm paraphrasing, but you use the word have done a good job based on "what they had." And you said one of the elements you meant by "what they had" was their financial resources, right? Said something along those lines, correct?

A. Yes, that's correct.

Q. And then -- and what I'm trying to understand is, do you understand what their financial resources were? Did you analyze those to be able to make a statement that what they did was good based on what they had?

A. My review of materials made it abundantly clear that there have been very serious resource constraints in both Lake and Trumbull Counties. I'm not sure there was -- so I don't have any ambivalence or uncertainty about that assertion.

Q. What is your position that there are resource constraints based upon? Explain to me exactly what your conclusions that there was

resource constraints on Lake County, first. What is that based upon?

A. It's based upon the totality of my review of the materials that are in the public domain, as well as that may have been produced that are relevant to the case in Lake County, as well as my, you know, ten to fifteen years of experience studying the epidemiology of the opioid epidemic, as well as the experience of communities to address it.

Q. What --

A. So --

Q. When were you hired -- when did you first begin looking at the situation in Lake and Trumbull Counties?

A. Well, as a professor and as a student of the opioid epidemic, I've been examining the progress that communities have made, as well as the setbacks that they've incurred, for years.

And unfortunately, Ohio has the dubious distinction of having had some of the highest morbidity and mortality in the country.

And as you may know, Trumbull County is one of the leading counties in terms of morbidity and mortality from opioids in the state.

And so, you know, I don't have a precise date for you, but I would say many, many years ago.

Q. What specifically -- your testimony was, "Upon the totality of my review of materials that are in the public domain, as well as that may have been produced that are relevant to the case in Lake County."

What specifically did you look at related to Lake County, specific to Lake County, that you base your position that there was considerable resource constraints on Lake County on? What specific materials?

A. Well, there's not -- there's more than one source of information. There's not a single --

Q. I didn't say a single. I said what specific, plural, material.

A. Okay. So one is the discussion that I had with Kim Frasier and the conversation with her.

Q. Okay.

A. And another is the review of morbidity and mortality over time, and the presence of specific programs or lack thereof in the

community.

Another is my review of the HUB report that -- and the community health improvement plan and the information within those reports. And another is the -- again, the broader context of these counties, which in one of the hardest-hit states in the country, have competing demands.

I mean, I've spoken with many individuals over time, in many different contexts, that have helped me to understand the competing demands in terms of county budgets.

But I was not asked to do a careful appraisal, line by line, of how many dollars were spent here and how many dollars were spent there. That wasn't what I was required to do. I was asked to develop, looking forward, a comprehensive plan for how the epidemic could best be abated.

Q. In looking at these counties, did you analyze the state or federal funding that was available and -- to address the opioid epidemic in those counties?

A. My plan looks forward, but I did not try -- I was not asked, nor did I net out in a quantitative sense the current provision of services in the counties. So I'm aware, for

example, that there are -- there may be federal or state dollars that flow through the county. For example, naloxone distribution through Project Dawn may be an example where the county benefits from a statewide initiative.

Recovery Ohio, the governor's task force, clearly has had some -- a salutorious [sic] impact or effects or activities at a county level.

But I wasn't asked, nor was I required -- nor did my report require me to net out or identify the sources of funding -- the sources -- the current sources of funding for opioid-related programs.

Q. You weren't asked, nor were you required, nor did you do those things, correct?

A. I was asked to develop an abatement plan, and that didn't require me to disaggregate the current sources of funding for current opioid-related programs.

Q. Have you analyzed to what extent Medicare presently pays for opioid-related programs in Lake or Trumbull Counties?

A. I provide evidence-based concrete steps that these counties can take to abate the opioid epidemic. This didn't require me to

identify or quantify the amount of current opioid-related activities that are paid for by Medicare.

Q. Have you analyzed which of your proposed programs, looking into the future, would be likely covered by Medicare funding?

A. My report focuses on the science and the public health and the implementation of these programs, but not -- not where ultimate funding for these initiatives would come from.

Q. So you haven't analyzed what state or federal funding presently pays for or, in the future, would pay for the programs that you are proposing; is that correct?

A. As it pertains to this case, I've not analyzed the distribution of funding for specific evidence-based programs that I suggest the community consider.

Q. You've implemented a five -- or a fifteen-year model; is that right, for your redress model?

A. Yes. I've proposed an abatement strategy that would extend over fifteen years.

Q. Why did you use a fifteen-year span, as opposed to less or more years?

A. Well, I'd like -- I would like to refer to my report, because I speak to that directly.

Q. Are you looking at your report or your redress model?

A. My report itself.

Q. Okay.

A. So it's Footnote F in the first sentence of Paragraph 33. I write that, "This medium-turn view strikes a balance - it is long enough to support infrastructure development and several cycles of planning and evaluation while avoiding some of the uncertainty entailed in trying to anticipate the magnitude of sequelae from the epidemic that may last decades or even generations."

Q. So if they had -- if Lake or Trumbull County had brought their case five years ago, would you have used the same fifteen-year span, or would you have increased that to twenty years to still reach 2035?

MR. ARNOLD: Objection to form.

A. I mean, that's a hypothetical question. I don't think that I can answer that. I don't know is the answer, what I would suggest.

But I do believe there's some value in having a proposed plan that's -- again, that strikes a balance between these -- these competing tensions or interests that I articulate in Footnote F.

Q. (BY MR. MANNIX:) And, again, in Footnote F, you're focused on the fifteen years as opposed to the year 2035; is that right?

MR. ARNOLD: Objection to form.

Q. (BY MR. MANNIX:) In other words, you're more focused on the reasonableness of fifteen years, as opposed to drawing it out to the year -- anything special about the year 2035, right?

MR. ARNOLD: Objection to the form.

A. Yeah. In this footnote, I'm speaking to the duration of the abatement plan and my belief that an abatement plan needs to be -- needs to strike a balance in terms of the duration of the plan itself. Yes, that's correct.

Q. (BY MR. MANNIX:) Has anything changed related to the opioid crisis in Trumbull and Lake County in the last five years that you believe is of significance?

A. Yes.

Q. What?

A. I mean, this is a dynamic process. I mean, this is -- you know, I mean, among other things, we've had a global pandemic. And, you know, deaths in many communities are higher than ever before.

So an enormous amount has changed, but -- but the principles of abatement and a sound abatement strategy remain the same.

Q. You mentioned the pandemic. And generally you said that it's a dynamic process.

Anything else, over the last five years, with respect to the opioid crisis in Trumbull or Lake County that you considered significant?

A. Yes, many -- many factors. Again, you know, there are a lot of different things in flux that affect the fabric of the community and the ultimate -- the ultimate contours of the epidemic.

So the principles of a sound abatement strategy, I believe, are unchanged. But among other things, the -- you know, the evidence base has evolved. Different programs may have been launched or extended or superseded by other

programs and so on and so forth.

Q. If you could turn to Page 12 and 13 of your report.

A. Okay.

Q. On Page 12, and then specifically on 13, you list these four categories of programs, right?

A. Yes.

Q. And you have four categories and then subcategories ranging between four and six under each category, correct?

A. Yes.

Q. And then in the following pages -- you're familiar with your report. In the following pages, you -- I think it's 14 to 67 you acknowledge that some of these programs that you're addressing, Lake and Trumbull have implemented some measures similar to what you've identified; is that right? Do you recall that?

A. Absolutely. Yes.

Q. Okay. Are you aware of whether the pharmacies have implemented any of the programs that you mentioned in your analysis, in your abatement framework?

A. Which programs? I mean, Section 3-B

is criminal justice system. So how could that apply to a pharmacy? A pharmacy isn't a criminal justice system.

Q. Fair enough. I was just asking of any. You know, you have these categories.

You're very familiar with your report, right?

A. It's -- I mean, there -- it's a long report, and there are six hundred plus references in it, but I understand the broad contours of the report, yes.

Q. But the framework of the report, you're familiar with, right?

A. Uh-huh.

Q. Okay. And look for sure. But it's a similar framework that you used in the West Virginia case?

A. Similar. Not identical, but similar, I believe.

Q. You had four categories in the West Virginia case, and then there's subcategories. Subcategories are not identical, but similar, right?

A. Yes.

Q. I'm just asking, with your knowledge

of these programs, your knowledge or framework for any -- this report and other reports of the programs that you identified, are you aware of any programs, that you're recommending, that the pharmacies have implemented already in Lake and Trumbull County? Are you aware of any?

A. Well, I think, as it applies to this case, a major opportunity for the pharmacies is with respect to the institution of measures to reduce the oversupply, and unnecessary oversupply of opioids in the supply chain. And I believe that there's an appendix to my report that discusses in detail the public health rationale for these measures.

But my development of that appendix did not require me to evaluate the specific actions of pharmacies to date. And I would leave it to Mr. Catizone or other experts to do so.

Q. So as you sit here today, you do not know -- not looking forward, but existing, preexisting programs by pharmacies as to whether they do anything that is outlined in your report, you don't know sitting here today, correct?

A. No, that's not correct.

Q. Okay. What programs do you know that

the pharmacies run that are outlined in your framework, your abatement framework?

A. Well, I reviewed the section of Mr. Carmen Catizone's report that elucidated or that outlined what appear to be significant missed opportunities on the part of pharmacies to institute safer practices to reduce the oversupply of prescription opioids in the supply chain.

Q. And that was based on Mr. -- or Catizone's analysis, right?

A. Correct.

Q. Have you analyzed any existing programs, personally analyzed any existing programs within the pharmacies?

A. I have some experience. I have published papers on pharmacy-based interventions, and I have performed independent scholarship looking at pharmacy-based interventions.

And so I do have some experience in understanding of the sorts of interventions that pharmacies could potentially implement in order to reduce opioid oversupply.

Q. I -- my statement was as to existing programs existing in Lake and Trumbull County operated by pharmacies, have you analyzed those?

A. My abatement report didn't require me to analyze and net out existing programs that may be operational in Lake and Trumbull Counties.

Q. If you look at, for instance, Page 20 of your report. If you look at Paragraph 57. And you're talking here about patient and public education, correct?

A. Yes, that's correct.

Q. And you acknowledge, in Paragraph 57, that Trumbull County has an outreach program through the ASAP program, right?

A. Yes, that's correct.

Q. What information do you have on the details of that outreach program?

MR. ARNOLD: Objection, form.

Q. (BY MR. MANNIX:) I mean, other than what's stated here, you state, "For example, the Coalition disseminates education materials to address stigma, provide tools that parents can use to discuss substance use with their children, and maintains a directory of treatment and recovery support within Trumbull County."

Do you see that?

A. Yes, I do.

Q. Other than that, do you have any

additional information related to the ASAP outreach program related to patient and public education?

A. Well, I would want to look at the materials in my report. I mean, I would start with Reference 188. But there are, you know, six hundred plus references in my report. And then we identified another, I don't know, two hundred or however many in the additional materials that I consulted, but didn't use directly.

So there may well be other materials that provide more context for the alliance for substance abuse preventions, outreach efforts within the community of Trumbull County.

Q. All right. And Citation 188 is a link to the website for the TCMHRB. Okay?

As you sit here today, do you have any knowledge of additional information related to the ASAP program that you identify in Paragraph 57 of your report?

A. Well, as I sit here today, I mean, my approach in answering your question would be similar to any other day, which is to look carefully at the totality of evidence that I have available.

And so, you know, to answer your

question, I'd like the opportunity to look at that reference, as well as other references in my report that may be relevant to your question.

Q. Would you have any knowledge of the amount of money that was expended by the ASAP program related to the patient and public outreach over the last five years? Did you look at that information?

A. Again, what I would say is that I think the communities have done the best they -- they can with the resources that they've had and what they have had.

And my forward-looking abatement plan was not predicated on or didn't require me to parse out line by line the amount of dollars spent for specific programs and services in the community.

Q. Did you attempt, in any way, to analyze the effectiveness of that ASAP program in seeking the goal of patient and public education?

A. Well, there's an enormous evidence base to support the effectiveness, and in many cases cost effectiveness, of the types of interventions that I propose.

So I didn't do a retrospective evaluation of the impact of any specific program in

the community. But I can assure you that there is not a lot of disagreement in public health and public policy about the effectiveness of the types of interventions that I propose in my abatement plan.

Q. Is it your opinion that the existing program, this ASAP program in Lake County -- or excuse me, in Trumbull County, related to patient and public education, was not sufficient to accomplish the goals of your plan as it relates to patient and public education?

A. Well, I haven't done a line-by-line retrospective on the spending or resources that were committed to one particular plan, or one particular program or another, because that wasn't required for me to develop my abatement program, which is a forward-looking program to prevent further harms from accruing in these communities.

Q. And I wasn't asking for spending or resource retrospective. I was talking about performance or effectiveness of the program.

Does your answer remain the same, or did you do an analysis of the effectiveness and performance of the existing program to compare to what you're proposing?

A. What I do is discuss a large number of complimentary interventions, and I leave it to -- that are evidence-based. And I leave it to the communities to ultimately determine the plan, the mix of services and programs.

And part of that process, at a community level, will be deciding what already is adequately resourced within the community and what isn't.

So that's something that the community would decide, not me.

MR. MANNIX: I think it's 12:30 exactly. I think that's when we said we'd take our break, so why don't we do that. Plan on 1:15 coming back?

A. That's fine. Or 1:00, if you prefer and others prefer. Either way would be fine.

MR. MANNIX: Yeah. Let's shoot for definitely 1:15. My experience is thirty minutes is always -- it's a little longer than that. So somewhere in that thirty or forty-five minutes. But we'll do 1:15.

A. 1:15 it is. Thank you so much.

THE VIDEOGRAPHER: Off the record, 12:31.

(Whereupon, a lunch break was had from 12:31 p.m. until 1:17 p.m. EDT)

THE VIDEOGRAPHER: We are back on the record at 1:17.

Q. (BY MR. MANNIX:) Dr. Alexander, we are back from lunch.

You may presently be muted.

The -- I want to cover a few things from this morning that we -- one thing was the -- that you had the ability to pull up those redress models. I think you were looking at Page 2 or 3. We were talking about the percentage of reduction that you were anticipating.

MR. MANNIX: I think Lauren from my office is here.

Lauren, can you put that up on the screen?

I just need to check and make sure Lauren is here.

MS. CATANZARITE: I am here. I'm working on getting them up on the screen for us.

MR. MANNIX: Okay. Thank you.

MS. CATANZARITE: Paul, do you have a preference as to whether it's Lake County first or Trumbull County?

Q. (BY MR. MANNIX:) Doctor, do you have preference?

MR. MANNIX: I have Lake County up, so can we go to Lake County?

MS. CATANZARITE: Lake County it is. Can you see my screen?

MR. MANNIX: I can see it.

Q. (BY MR. MANNIX:) Doctor, can you see it?

A. I can. I can.

MR. MANNIX: And if you want to reference anything -- I don't know if you can pull it up --

You'll have to click on it again, Lauren.

Q. (BY MR. MANNIX:) Well, point us to where you're --

A. Yeah. I think Line 24 may have either not be displayed in full, or it may have been cut off in the production process. But Line 24 is cut off. And so if you make it wider -- I don't quite know what happened. But the bottom line is that -- that I believe that what I project is that these interventions will reduce the number of, and there's a missing -- essentially, there's a

missing line there.

But I believe what it says is that based -- given that I proposed more comprehensive coordinated and sustained interventions, I project --

Thank you. There you go.

So the bottom line is there --

THE REPORTER: I'm sorry. He froze. I can't hear anything.

MR. MANNIX: I can't either so that's fine.

THE REPORTER: Off the record, Videographer?

THE VIDEOGRAPHER: We're off the record. It's 1:20.

(Whereupon, a break was had from 1:20 p.m. until 1:22 p.m. EDT)

THE VIDEOGRAPHER: And we are back on the record at 1:22.

Q. (BY MR. MANNIX:) Doctor, when we lost you, Lauren had expanded so you could see the full paragraph under "Intervention population."

Can you explain what your conclusions were as to the percentage reduction that you would expect to see or hope your plan would result in?

A. Yes. I project that the interventions that I propose will reduce the number of individuals with opioid use disorder and other relevant populations by fifty percent over fifteen years, 15 years. And I use this to scale the intensity of the different interventions in my model.

Q. Okay. So what we were discussing when we were on that line of questioning is the idea that your expectation is not that it would go down to zero, the individuals with OUD. There would still be individuals in Lake and Trumbull County who had opioid use disorders, correct?

A. Yes. I didn't design a plan that will necessarily reduce these populations to zero.

Q. And is there a reason why? Is that not possible to do that? Or why does your model not attempt to achieve something greater than fifty percent?

And, ideally, we'd have no one with that. But go ahead.

A. I apologize for speaking over you.

I think fifty percent reduction would be an enormous gain. And even one life lost from the opioid epidemic is one life too many.

But there are a lot of countervailing forces. And if this were easy, these communities might have been able to have experienced lower rates of morbidity and mortality thus far.

So I think that fifty percent reduction over fifteen years, again, strikes a good balance between a bold plan, but one that is achievable and will improve the quality of life for, you know, for many residents in these two counties.

Q. We were talking earlier about, you know, what you were asked to do and what you looked at. And I understood, you didn't look in full detail as to the programs that were in place or analyze them. I think you said that yours was a prospective program.

If -- the one thing I want to understand, though, is if you haven't looked at a program that exists in the county, and let's say the county is operating a program that you are proposing to the same extent and the full effect that you would want it to be run and operated, and it just is not having much success, wouldn't you want to know that in order to determine whether it makes sense to include that exact program in your

prospective model?

MR. ARNOLD: Objection to form.

A. I was asked to make recommendations about what should be done, not quantitatively, what more should be done above and beyond specific programs that may be in place.

Evaluation is a critical part of what I'm recommending. And I devote a significant section of my report to discussing the evaluation of programs and services. So I'd be happy to discuss those with you if helpful.

Q. (BY MR. MANNIX:) Okay. But my point being is, wouldn't you need to know, want to know if -- how successful the program is? I think you indicated earlier that you didn't evaluate it in great detail, the successor, the performance of each and every existing program. And wouldn't you want to and have to know that in order to determine whether what you're proposing, if it's identical to an existing program, is going to be successful or not?

MR. ARNOLD: Objection to form.

A. It's not as if my recommendations are simply to be pasted on and sort of fill holes, you know, fill potholes that may exist in the

community. Rather, what I provide is a comprehensive suite of evidence-based interventions.

And it's to -- it's for the communities themselves to examine what they have in place at the time that this abatement program is undertaken, and to compare and contrast what I've recommended with what they have in place.

And by all means, the sort of evaluation that you're talking about will be an important component of the -- you know, evaluation of programs is an important component of the sort of abatement activities that I recommend.

Q. (BY MR. MANNIX:) And you're saying it will be an evaluation. You're expecting the communities to do that?

A. Yes. I discuss, in my report, a framework for evaluating the effect of different community-based interventions.

MR. MANNIX: Lauren, if you could pull that off the screen, what's on there now, I'd appreciate it.

But, thank you. I think we're done with that for now.

Q. (BY MR. MANNIX:) We also talked

about the fact that you prescribe opioids, you prescribed opioids in your practice, and we discussed your expectations as to whether that would be filled. And I think you indicated -- I don't have the exact language, but the -- there may be circumstances where you wouldn't expect a pharmacy to fill a prescription for opioids that you wrote.

Under what circumstances would you expect a pharmacist to refuse to fill a prescription that you wrote?

A. There might be, you know, any number of different situations. A patient might not come in. A lot of patients don't come in for the first fill. So patients might not come in to get the prescription.

The out-of-pocket costs may exceed what the patient is willing to pay, and so it may be cost prohibitive. The patient's -- a patient's family member may -- or a patient may come and discuss with the pharmacist and in -- you know, and a pharmacist should be making a reasoned judgment about whether or not filling the prescription is consistent with best pharmacist practices.

Q. Okay. Would you expect a pharmacist

to second-guess your medical judgment as to whether a prescription is appropriate for a certain individual?

MR. ARNOLD: Objection to form.

A. Well, a pharmacist has access to information that I don't have. So I guess I don't view it quite as maybe defensively as thinking that it would be second-guessing me, but rather that a pharmacist is part of the care team and plays an important role and is privy to data and information that I may not have that may suggest that the dispensing of the opioid is actually quite unsafe.

Q. (BY MR. MANNIX:) So it would be other information available, as opposed to trumping your medical judgment; is that right?

A. Again, I -- my model or framework is not where one person's knowledge trumps another. I view pharmacists as an important ally in the care team. And if I was contacted by a pharmacist, I'm always open ears to hear what they have to suggest.

Q. And if you told that pharmacist to fill the script, based on your medical judgment, would you expect them to use their own medical judgment to not fill the script?

MR. ARNOLD: Objection to the form.

A. I've never -- I've never encountered that scenario in more than twenty-five years in clinical practice.

Q. (BY MR. MANNIX:) We talked about existing programs in Lake and Trumbull County. And I just want to make sure I understand your testimony on a related matter. And that is, there are existing programs in Ohio that relate to some of the programs in your abatement framework. Are you aware of such programs?

A. I'm sorry. I think I missed one word, but it was an important one. You said there are existing programs in Ohio that what?

Q. That relate -- I think I said that relate to.

A. That relate to, yes. Yes, there are.

Q. Did you analyze those from a standpoint to determine if they would serve the purpose that your programs are set to serve and, therefore, the programs that you are proposing would not be necessary, the Ohio State programs?

MR. ARNOLD: Objection to form.

Q. (BY MR. MANNIX:) Doctor, you can --

A. With all -- I mean, with all due respect -- and I know that we have discussed

this -- I was not asked, nor did I try to just patch on sort of additional programs on top of what was being offered in order to create a whole.

What I was asked to do was to develop a comprehensive abatement program, soup to nuts. And so all of these questions about sort of, well, did I consider what was being done, the answer to all of them is the same in that I did consider them, and I qualitatively considered them.

But I wasn't ever asked to net out either quantitatively, financially or otherwise, specific programs or services.

So, like, if you take naloxone distribution, the State has Project Dawn, which has been a very important program at a state level. But I didn't say, in my report, that naloxone is less important because the State is doing it. That's not -- that wasn't my goal. I write about the importance of naloxone. I do highlight, though, that Project Dawn has played an important role, and I discuss that.

So I hope that's helpful in -- you know, in sort of outlining what I tried to do versus what I didn't try to do.

Q. Understood. I think you made that

point. Certainly we talked in detail about county programs primarily in the morning. And I just wanted to make sure that that approach that you took applied also to state and federal programs. And I think the answer is yes; is that right?

A. Yes, that's correct. The same approach and the same -- the same strategy applied, yes.

(Exhibit 2 was marked for identification.)

Q. (BY MR. MANNIX:) I'm going to turn now -- I know the points you've referred to, the indicators that are found in the Catizone report, Appendix F, is what I'm going to refer to. I think that is -- gosh, I should know this now.

Is that Exhibit 2?

Yeah. Exhibit 2 of those documents I provided.

A. Okay. I have that in front of me.

Q. And Exhibit F -- 2, Appendix F, which is Exhibit 2, is referenced in your report at Paragraph 14. I'm going to read this to you. You can certainly refer to it.

Paragraph 14 of your report says, "In addition to the redress model, I was asked to

review the literature on certain potential indicators of high-risk opioid distribution and describe their evidence base. See Appendix F."

And is that what led you to prepare Appendix F, what you describe there in Paragraph 14 of your report?

A. Yes. Yes, it is.

Q. Now, in Appendix F -- let's look at this twelve-page document, which includes several pages. About half of that is citations. You speak of indicators that are identified in the Catizone report, correct?

A. Yes, that's correct.

Q. And I think you say -- yeah, about the fifth line down in your Appendix F, you say, "I reviewed the portion of Carmen Catizone's expert report in which he identifies indicators that are triggered based on information about prescriptions, patients and prescribers."

And it goes on further, but I just -- so you reviewed a portion of his report.

Do you know when you reviewed the portion of his report that you reference there?

A. Well, I've reviewed it recently, but believe that I also reviewed it sometime ago. And

I clearly reviewed it before I submitted this report, because I stated such.

So I don't know the exact date, though.

Q. Yeah. And that was not a well-framed question, because I understand you may have reviewed it before the deposition.

But before preparing your report, you reviewed a portion of his report, right?

A. Correct.

Q. And do you know if you assisted him -- or do you recall assisting him in preparing the portion of his report that he prepared?

A. Well, again, I mean, this feels like a similar line of questioning as to how I engaged with Expert Rosen. And the answer is that anytime I engage with anybody around these matters, my focus is on the science. And fortunately I'm encouraged to follow the true north, which is the science, and I do everything I can to try to communicate what I know to whoever I'm speaking with and to try to be of service.

So I don't know if that answered your question, but that's my general approach in speaking with others about these matters.

Q. All right. The Catizone report includes a list of what you call "indicators," correct?

A. Yes. I believe that it does.

Q. And did you -- is it your understanding that Dr. -- I don't know if he's a doctor -- but Carmen Catizone prepared that list of indicators?

A. Well, ultimately, Mr. Catizone has to speak for them. I don't know the process that was used to derive that list. I don't know the details of the process that was used to derive that list.

Q. Okay. Were you involved in the development of that list?

A. Again, I have a hard time answering that question. What I can say is that I shared my knowledge regarding the evidence base to support these types of indicators. And, you know, my report includes seventy-four studies or references. And -- and many of these are studies that I am -- have significant familiarity with. And so I may well have discussed these with Mr. Catizone in an effort to try to be of service.

Q. Okay. But as to whether you had discussions with him, you attempted to be of

service, whether he used that to develop this list or not, you don't have firsthand knowledge, as you weren't involved in that particular process of the development of the list; is that fair?

A. That's correct. I'm not aware of the precise methods that Mr. Catizone used to derive the list that he has included in his report.

Q. Do you -- other than recent dealings with him, were those all in 2021, you think, or did you have communications with him before that?

A. I think it's likely I spoke with him during 2020, as well as 2021.

Q. The end of 2020 you think?

A. Well, I doubt it was the first half, but it could have been Quarter 3.

Q. Got it.

Prior to having discussions with him in the third quarter of 2020 and 2021, did you have any dealings with Mr. Catizone before that?

A. Well, just to be clear, I don't know precisely when these discussions took place, so I'm sorry if I misconstrued that they definitely took place during the third quarter of 2020.

But if you're asking whether I spoke with him or interacted with him prior to this case,

the answer is, no, I have not, to my knowledge or recollection.

Q. And that's what I was asking. Thanks.

Your interactions with him, was that done in person, via Zoom, conference calls, a little bit of both?

A. Well, again, unfortunately, the pandemic precluded what may have otherwise been in a nonpandemic world face-to-face meetings. I do not recall if we engaged by Zoom or by telephone, but I do not believe I've ever met Mr. Catizone face-to-face.

Q. Other than what's contained in Appendix F, did you use information provided by Mr. Catizone to prepare any other portion of your report?

A. I don't know the answer to that. My report has, as we've discussed, you know, six hundred plus references. And then there were another hundred or two hundred that were considered, though not directly cited.

And so I don't know whether Mr. Catizone alerted me to or directly provided materials that may have informed other portions of

my report.

Q. Are you aware of whether or not Mr. Catizone prepared a supplemental report since his April report?

A. No, I am not.

Q. What is your understanding of Mr. Catizone's area of expertise?

A. Well, I would leave that to him to describe. But I believe he has significant experience in understanding the pharmaceutical supply chain and the -- and methods used to promote and maximize the safe flow of controlled substances through the pharmaceutical supply chain.

Q. In his report, he identifies himself as having an expertise in the practice and regulation of pharmacy.

Do you have any reason to dispute that?

A. I wasn't asked to critique Mr. Catizone, nor any other expert's qualifications per se. And that's not what I focused on in my abatement program.

Q. All right. So you don't have a position one way or the other whether he has an expertise in the practice of regulation of

pharmacy -- excuse me, the practice and regulation of pharmacy?

A. Again, my program is focused on concrete measures that can be employed by these communities, and didn't require me to closely evaluate the credentials and professional experience of, you know, every individual that I spoke with in order to make the recommendations that I've made.

Q. Well, we're talking about Appendix F, right, not your abatement framework, in the report right now?

A. Appendix F represents my own beliefs, and I stand behind it. I'm happy to review any portion of that appendix with you. But I, at the time that I submitted, you know, Appendix F, it -- you know, and what -- what I would be happy to review with you today is my own beliefs, not those of Mr. Catizone's.

Q. Understood.

But my question, I was asking about your understanding of his expertise. And you indicated earlier that he had developed the list that you then included in Tab 6 -- or Tab 1, Page 6 of your report.

A. Well, I'd like a minute to review this, please.

(Pause.)

Q. (BY MR. MANNIX:) Well, yeah. I don't know if there's a question there, but you can certainly review. I'm not going to prevent you from reviewing it.

Let me ask you this: You reviewed a portion of his report, though, you mention that in Appendix F, right? Appendix F, Paragraph 1, you say that you reviewed, "A portion of Carmen Catizone's expert report in which he identifies indicators that are triggered based on information about prescriptions, patients and prescribers, and which have been recognized by defendants and/or law enforcement. These indicators are listed in Table 1 below."

So you say he identifies indicators.

You then list those indicators in Table 1, right?

A. Yeah. But what I would say is that there's not a lot of -- I mean, this wasn't a terribly difficult process in terms of identifying the types of indicators and the evidence base to support them that can be used by pharmacies and

other actors in the pharmaceutical supply chain.

In other words, if I had -- in other words, it wasn't as if, you know, I had a blank slate and I said, Mr. Catizone, can you please give me what you have, and I'm going to pipe it into my report because I have no idea what to do. Not at all. I mean, it would be easy.

And, in fact, even prior to speaking to Mr. Catizone, I believe that I had conceived of and conceptualized these broad categories of indicators.

Q. Okay. So is it your testimony that you didn't need Mr. Catizone at all in developing this list?

A. No. No, it's my testimony that I was provided with a list, and that it was highly consistent with what I may well have identified using my own independent approach. And there may have been some slight differences around the edges in how one or two of these -- I mean, how some of these were operationalized or precisely defined.

But the evidence base is there. I mean, there's twelve pages of evidence for you in terms of the rationale for using things like concomitant drugs.

In other words, I didn't need Mr. Catizone to tell me that when a patient fills both the benzodiazepine and a prescription opioid, they're at much higher risk of potential trouble.

Q. Okay. Mr. Catizone, as I said before, identifies himself as having expertise in the practice and regulation of pharmacy.

Do you hold yourself out as an expert in the practice and regulation of pharmacy?

A. I hold myself out as a professor of epidemiology and practicing internist with extensive experience in the role of pharmacies and pharmacists in the pharmaceutical supply chain, including how it pertains to the opioid epidemic.

Q. Okay. And I take it, from that answer, you do not hold yourself out as an expert in the practice of pharmacy; is that right?

A. I -- as a practicing internist, I prescribe medicines every day, including yesterday when I prescribed five or ten different prescriptions for patients.

So I -- you know, so I hold myself out as someone that has expertise as an epidemiologist, and as a practicing internist, in the pharmaceutical supply chain.

Q. How many days, during your lifetime, have you acted and practiced as a pharmacist?

A. I -- my -- my abatement plan didn't require me to act or practice as a pharmacist in order to have an understanding of how to abate the epidemic.

And in this instance, the role of potential indicators were flagged to identify potentially problematic pharmaceutical dispensing.

Q. Are you a licensed pharmacist in Ohio?

A. I practice in the state of Maryland, not the state of Ohio.

Q. Are you a licensed pharmacist in Maryland?

A. I'm a practicing internist. So I prescribe medications on a regular basis, but I'm not a practicing pharmacist, nor did my expert report -- nor did my expert report require me to be such.

Q. If you were in front of the Ohio Board of Pharmacy and they asked you if you are an expert in the practice of pharmacy, would you answer yes or no?

A. I would answer just as I'm answering

now, which is to thank them for the question, let them know that I'm a practicing internist, and that my field of study is pharmacoepidemiology, which is the study of the use, safety and effectiveness of prescription medicines.

And as a pharmacoepidemiologist, and having done this for many, many years, I have extensive experience in the pharmaceutical supply chain and how drugs flow through the pharmacy system.

Q. Do you know if holding yourself out as an expert in the practice of pharmacy in Ohio, whether that would violate the rules of the Ohio Board of Pharmacy?

MR. ARNOLD: Objection to form.

A. I think the term "holding myself out as" is a little bit counter to how I think about these matters. The way I think about it is, do I have experience the field of pharmacy. And the answer is, yes, I have enormous experience.

I have worked closely with pharmacists for many, many years, I've published dozen, more than a hundred or probably two hundred papers focused on prescription drugs.

I've carefully studied the actors in

the pharmaceutical supply chain. I have experience having worked on a national PMT committee for a pharmacy benefits manager. I've done studies of systems that pharmacies have implemented in an effort to improve controlled substance prescribing, and so on and so forth.

So that's what I would want someone to know who was interested in my experience regarding the practice of pharmacy.

Q. All right. Whether we say holding yourself out or claiming that you were an expert in the practice of pharmacy, do you believe that that would be in violation of the Ohio Board of Pharmacy rules --

MR. ARNOLD: Objection to form.

Q. (BY MR. MANNIX:) -- an illegal practice in Ohio of pharmacy?

MR. ARNOLD: Objection to form.

A. I haven't reviewed the Ohio Board of Pharmacy. But what I can tell you is that my experience includes -- I haven't reviewed -- I mean, what I can tell you is that my experience as a pharmacoepidemiologist includes years of study of the use, safety and effectiveness of prescription medicines.

And doing this type of work at the level that I do and for the length of time that I've done it requires a complex and nuanced understanding of actors in the pharmaceutical supply chain. And that includes pharmacists and pharmacies.

Q. (BY MR. MANNIX:) I'm not asking if you have experience. You know, experience is one thing. In the legal profession, in the court of law, an expert is another thing. There's experience, there's expert.

Do you hold yourself out as an expert in the practice of pharmacy in Ohio?

MR. ARNOLD: Object to the form. You've been over this question again and again. You've got his answer. You should move on.

MR. MANNIX: I'm not. I really very rarely get direct answers to my question, so I'm asking that he answers this question.

MR. ARNOLD: I think he answered the question.

A. I think I've answered the question. But as it applies to this case, I believe that I have the understanding, the requisite understanding of the pharmaceutical supply chain in order to make

the recommendations and draw the opinions that I've drawn in my expert report.

Q. (BY MR. MANNIX:) Are you -- you know, I see various things throughout your report. With respect to pharmacists, do you believe that you have the expertise -- or what -- let me ask you this: Do you provide any opinions as to the standard of care related to pharmacists, in your report -- standard of care of pharmacists?

A. Well, I think the closest I come to that is probably in Appendix F where I discuss the variety of opportunities that pharmacists and pharmacies have to improve the safe dispensing and distribution of controlled substances.

Q. Okay. And that's what I'm focused -- I do want to focus our attention right now on Appendix F.

In Appendix F, do you provide any opinions on the standard of care of pharmacists?

A. What I do in Appendix F is outline the evidence base, the broad and substantial evidence base supporting the use of a variety of flags or indicators of potential high-risk prescription opioid prescribing, dispensing, you know, and use and so on.

Q. Did you study, in relation to Appendix F, and what you've placed in your -- the contents of Appendix F, did you study the specific actions of any of the defendant pharmacies and their pharmacists related to Appendix F?

A. Well, I reviewed Mr. Catizone's report, and I believe he does so. But the development of my Appendix F did not require me or wasn't predicated on having studied the specific actions of defendants in this case.

Q. Okay. So I just want to break that down. I understand you looked at his report, and his report says what it says. And if you reviewed that, you saw what was in there.

But as far as you personally investigating studying the actions of the defendant pharmacies in this case, you know, in Lake and Trumbull County, as I understand, the answer is you did not do that; is that correct?

A. To develop my Appendix F, my -- my development -- you know, in Appendix F, I outline the evidence base supporting the use of indicators or flags for high-risk use. And this didn't require me, nor did I, undertake a study of the specific actions of specific defendants in this

case.

Q. So you're not opining in Appendix F, or anywhere else in your report, that the defendant pharmacies failed to follow the standard of care in dispensing opioids; is that fair?

A. In my report, I outlined the evidence base to support a number of different flags or indicators of high-risk prescription drug distribution or -- or use. But I did not opine on the actions of specific defendants with respect to how they may have failed to adhere to standards of care.

Q. In Appendix F, we talked a little bit about Paragraph 1. And then Paragraphs 2 through 10 appear to add some more description to the headings in Tab 1 generally, right?

A. I'm sorry. You said the headings in Tab 1?

Q. Yeah. You know, in Paragraph 1 you say -- you say what you say there. But you say also, I listed indicators in Tab 1.

We look back at Tab 1. We see what the -- under the column of "Concept," what the various indicators are, the first one being "Frequency, dose and duration."

And then we go back to the other Paragraphs 2 through 10 of Appendix F. You describe, in Paragraph 2, "Frequency, dose and duration." And you provide various support for positions under that category, correct?

MR. ARNOLD: Objection to form.

A. Yes, that's correct. Table -- Table 1. I was a little thrown off by the use of the word "tab." But, yes, that's correct. The sections -- the Paragraphs 2 through 10 correspond at a high level with -- or 2 through 9 correspond with the rows in Table 1 in Appendix F.

Q. (BY MR. MANNIX:) Okay. And there's -- as you said before, I think there's seventy-four sources that you cite to throughout Appendix F, right?

A. Yes, that's correct.

Q. And how did you go about finding the articles that you cite in Appendix F?

A. Well, I used a process similar to my -- the process that I used in my main report, which is outlined in Paragraph 11 and Paragraph 15 of my main report.

Q. Okay. Are these articles that you and team members at Monument Analytics sought and

identified and cited in your Appendix F?

A. Yes, they are. And many of them I may have been familiar with prior to this undertaking, but others I probably learned of only through a refresher or rereview of the evidence base.

Q. Did the -- did anyone from any of the law firms you're working with in this case, were they used to help find articles that are cited in Appendix F?

A. I doubt it. I don't remember -- I don't remember for sure. But, in general, the firms are not, you know, feeding me articles. They -- I am -- I am free to find anything that I like. And I suppose there may have been one or two articles, or a few articles that were sent to me, but I don't recall is the bottom line.

Q. In reviewing the articles, both the citations as well as what's in the text of Appendix F, it appears that many of these articles are national based studies; is that right?

A. I would have to review them with you, but I would not be surprised if that's the case.

Q. And some are more state specific. I've seen Massachusetts, Maine, Maryland, Arkansas,

West Virginia. There might be another one or two that are referenced as state-specific articles.

Do you recall that being the case?

MR. ARNOLD: Objection to form.

A. I mean, again, we could look through these. But I think it's plausible that many are national and some are state.

But just to be clear, when something is, quote/unquote, state specific, that doesn't mean it's only applicable to that state. It may mean that it was a study in one state, but it may be highly applicable, or what we say in the field, generalizable to many other states.

And so the generalizability of an article is something that I routinely will evaluate as I consider the use of scientific evidence to support a scientific assertion that I'm making.

Q. (BY MR. MANNIX:) And it's your recollection that you conducted this generalizability analysis in preparing Appendix F?

A. Always. I mean, in any -- it's just a part and parcel of good -- good epidemiology. It's not something that I specifically looked at seventy-two articles and, you know, categorized for each one yea or nay. But a routine dimension of

the work that I do as a scientist is understanding and thinking about issues of generalizability.

Q. Based on my review, I saw no articles that were Ohio specific, or certainly not Trumbull or Lake County specific, that that's where the studies were done, right?

Do you have a different recall or --

A. I don't know if that's the case, and I would have to look at the articles with you. But I don't think that that undermines the potential import of my conclusions or recommendations.

You know, the -- I mean, as the citizens of these counties know, there -- you can't just -- it's not like there's a one-size-fits-all approach, on the one hand.

So clearly the abatement plan needs to reflect and be of, by and for the community. We've discussed that.

But there's also a good scientific evidence to support the value of these specific indicators. And the value of them isn't going to be conditional on -- you know, on whether you're in Kansas or whether you're in Kalamazoo.

I mean, the -- if you think about something like the potential risks posed by

combining dangerous drugs together, that doesn't change when you move from San Francisco to Seattle or from Iowa to, you know, Nebraska. That's an inherent risk of combining these medicines together.

So I hope that's helpful as you're thinking about the generalizability of these studies.

Q. In the Paragraph 10 of Appendix F, I want to talk to you about that a little bit.

A. Okay.

Q. In -- the first statement says, "Pharmacies and pharmacists play an important role in addressing the opioid epidemic, given their position, within the pharmaceutical supply chain and face-to-face interactions with the patient."

Do you see that?

A. Yes, I do.

Q. And then can you read the next sentence, starting, "First and foremost"?

A. "First and foremost, pharmacies and pharmacists should follow up on indicators of opioid misuse, since they have the authority to refuse prescription fills or to gather further information so as to allow for the dispensing of

controlled substances under the safest conditions possible."

Q. You indicate there that pharmacists, under certain circumstances, can refuse to fill prescriptions; is that right?

A. Sure. Absolutely.

Q. And do you maintain that you have an expertise in deciding precisely what circumstances a pharmacist should fill and when a pharmacist should refuse a prescription?

A. I wasn't asked in my report to opine on specifically under what circumstances a pharmacist should fill or refuse a prescription.

Q. When you write a prescription for a patient, is that generally done based on a clinical examination of a patient?

A. It depends.

Q. Okay. What circumstances or how do you go about -- you said you've prescribed opioids before. Give me the scenarios in which you have prescribed opioids.

And let me clarify that.

What are the scenarios which lead you to do that, not the specifics of a certain patient, but sometime -- is that sometimes done simply by

looking at their medical records?

A. No.

Q. Okay. Is it sometimes done by simply examining them?

A. No.

Q. What are the events or what do you do, what have you done in the past, that lead you to prescribe an opioid for a patient?

MR. ARNOLD: Object.

A. I've got -- I've got to gather the information that I need to be sure it's the best choice.

Q. (BY MR. MANNIX:) Okay. And how do you gather that information?

A. It depends on the case.

Q. Okay. What are some of the things you do to gather the information?

A. I may speak with the patient, I may evaluate the patient, I may examine the medical record, I may speak with patient's family members, I may check the prescription drug monitoring information for the state, I may speak with other clinicians, I may consult the medical literature and clinical decision support software. I mean, there are a potentially large number of inputs, and

it really just depends upon the case.

Q. Is it fair to say you don't expect a pharmacist to conduct a clinical examination of a patient when they come to have a script filled at the pharmacy?

A. Well, I think a pharmacist does have an obligation to evaluate physical cues that may be present when engaging with patients. But I suppose maybe that doesn't qualify as a formal physical examination. I don't expect a pharmacist to listen to a patient's lungs with a stethoscope, if that's what you're asking.

Q. The type of examination that you do prior to prescribing opioids, you don't expect the pharmacist to do the same type of examination; is that fair?

A. Yeah. I think a pharmacist has a separate and complementary responsibilities that -- and in some cases, overlapping responsibilities with a prescriber, such as a physician or nurse practitioner. And so that's what I believe the pharmacists' responsibilities are.

Q. Do you have an understanding that you have access to certain records generally of patients that are not available to a pharmacist?

A. Yes. And the pharmacist has access to records that are not available to me.

Q. Okay. And what are the documents or records that you have access to, generally speaking, that a pharmacist does not have access to?

A. I don't -- I mean, it depends upon the pharmacist, the pharmacy and the patient and the health system. I mean, I just can't answer that question. I don't know, and my report didn't require me to know specifically what fraction of the information that I have is visible to the pharmacist and vice versa.

Q. So you don't have -- as a practicing internal MD, you don't have an understanding or an expectation of what information is available to the pharmacists that is different from the information that is available for you, or do you have an understanding?

A. Well, I think that -- I mean, in this day and age, there's an awful lot of information that gets piped around from system to system. And so that's -- that's one of the reasons why I'm more cautious in -- in asserting a response here than I would otherwise be.

For example, I believe, in many systems of care, pharmacists actually do have some diagnostic information about patients. And that may come as a surprise.

So that's why I don't feel like I can speak to this in detail. But I want to underscore that the preparation of my report, including Appendix F, didn't require me to know this information.

Q. You said something there about it would come as a surprise. I believe, in many systems of care, pharmacists actually do have some diagnostic information about patients.

Is it your understanding that pharmacists have the same amount of diagnostic information that is available generally to you?

A. So I was asked to develop -- within Appendix F, I was asked to develop discussion around the evidence base to support potential indicators of high-risk opioid distribution.

And that undertaking didn't require me to understand the detailed information that pharmacists may or may not have that, as a practicing clinician, I may or may not have.

Q. And you don't have that information,

the information as to what a pharmacist may or may not have, as opposed to what you, as a practicing clinician, may or may not have? You don't know what that difference is?

A. I've told you that I think it depends, and my guess is that it varies as well.

Q. And then you said earlier that that might come as a surprise.

Are you saying that may come as a surprise to you or to others? Who are you saying that may come as a surprise to? And I can read the exact quote, if you want me to go back to it.

A. No. Yeah. I think I was speaking to the fact that, in today's interconnected world, there is a greater visibility of information across different organizational structures than historically has been the case, in the pharmaceutical supply chain.

Q. Okay. And as we talked about before, you haven't spent any day of your life acting as a pharmacist, and you don't have an understanding, a precise understanding what information is available to them?

A. As a pharmacoepidemiologist, I have spent my career focused on the study of the use and

safety and effectiveness of prescription medicines. And this includes having worked very closely with pharmacists for many years to understand the practice of pharmacy, as well as the pharmaceutical supply chain.

Q. Okay. And do you or do you not understand what a pharmacist -- what information they have available to them?

A. I've told you I think it depends and it's highly variable.

Q. In the next sentence of Paragraph 10, you state that, "Pharmacies, and particularly pharmacists, are also ideal points for patient education and outreach on the risks of overdose and to implement programs for screening and referrals to OUD treatment."

Do you see that?

A. Yes, I do.

Q. And then you cite, I think, one article there, correct, article -- Footnote 67?

A. Well, the prior assertion in the same sentence cites a different reference, Reference 66.

Q. Oh, you're right. It's the same sentence.

So you cite those two articles for

that proposition; is that right?

A. Yes, that's correct.

Q. And then you go on further to state, "Pharmacies are also well-positioned to implement drug disposal or deactivation packets for individuals filling prescriptions for controlled substances (See also Section 1C of Expert Report), as well as harm reduction initiatives such as naloxone prescribing and dispensing."

Do you see that?

A. Yes.

Q. And you have -- you have four articles cited there, correct?

A. Well, again, if you include the first part of the sentence, there are a total of five articles. But, yes, I see those.

Q. Perfect. Okay.

I think we've talked about before, you have not assessed whether or not the pharmacy defendants have implemented these -- any of these types of programs in Lake and Trumbull County; is that right?

A. My report and what I was asked to do didn't require me to evaluate whether or not the defendants have implemented specific programs in

Lake and Trumbull County thus far.

Q. And then the last sentence here says, "However, pharmacists report that time constraints that result from organizational policies, such as those that arise from insufficient staffing or time requirements for filling a prescription, hinder their review of concerning patient behavior or prescribing practices."

Do you see that?

A. Yes, I do.

Q. And that's based on -- I'm going to get this one correct. I'm going to look at the rest of the sentence, not just the last -- you cite two articles there, right?

A. Correct.

Q. And -- all right. And these are not -- and these were articles that studies were done, correct?

A. Yes, I believe that's correct. Although I would want to review them specifically in more detail in order to provide a definitive answer to that question.

Q. And you were not involved in those studies, were you?

And you didn't conduct the interviews

or anything of that nature; is that fair?

A. Yes. I was not involved in the studies referenced in Reference 73 or 74 in Appendix F.

Q. And I reviewed these two articles. One is from, I think, five Canadians who write about pharmacy practice in Canada. And the other is from an Oregon story -- Oregon study.

Are you familiar with those articles, as you sit here today?

A. Again, I would want to review them more carefully if you have specific questions about them. But I included them because I felt that they supported the general assertion that I was making.

Q. In my review of those articles, they don't discuss any specific conduct particularly related to the defendants in this case.

Do you have any reason to dispute that?

A. Well, we've discussed the issue of generalizability before. And I would just say, again, for the record, that -- that a study can be conducted in one setting, and be highly generalizable and relevant to another setting. So it's an important matter and one that I considered

when developing my recommendations.

MR. ARNOLD: Paul, I'll just mention, since there's a moment of silence --

MR. MANNIX: Yeah. That's good. It's a good time to take a break.

MR. ARNOLD: Yeah.

A. May I ask what the total video time is on the record thus far?

THE VIDEOGRAPHER: Yeah. I'm going to have to add that up.

MR. ARNOLD: Why don't we go off the record.

THE VIDEOGRAPHER: Okay. Let's go off the record at 2:19.

A. Take your time.

(Whereupon, a break was had from 2:19 p.m. until 2:37 p.m. EDT)

THE VIDEOGRAPHER: We are back on the record at 2:37.

Q. (BY MR. MANNIX:) Dr. Alexander, we were talking about Appendix F, and I have a couple of final questions related to that.

We were talking about the information that you have and the pharmacist has. And I think, at one point, you said a pharmacist often has

information you don't have.

What are -- what's an example -- or what -- not just an example, but what information do you understand a pharmacist has access to that you don't have access to for a particular patient?

MR. ARNOLD: Objection to form.

A. I believe pharmacists typically will have information regarding the -- a patient's fill history, you know, within a given pharmacy or pharmacy chain. And these days may well have information about the broader use, the broader fill history for a patient beyond the pharmacy in question.

Q. (BY MR. MANNIX:) Now, in preparing Appendix F, we were talking about the defendants' conduct. And I think you indicated that you did not -- you weren't asked to and weren't required to, in order to prepare Appendix F, study the exact practices of each pharmacy defendant.

Did you, in any way, review the written policies related to dispensing of any of the pharmacies in preparing Appendix F, or any other part of your report?

A. I have broad familiarity with some of the policies that pharmacies have put in place in

an effort to try to improve the safe distribution of pharmaceuticals. But I didn't -- but the preparation of my report didn't require me to look at the defendants' policies in this particular instance.

Q. So you don't have an opinion as to whether or not their policies need to change or not in connection with their dispensing -- and your position is Appendix F -- considering you haven't reviewed their policies; is that fair?

A. Well, I think Mr. Catizone's report highlights many opportunities for improved, safe dispensing and distribution of pharmaceuticals. And so I -- and I did review those as part of my preparation for -- as part of the materials that I reviewed in developing my own opinions.

But my report focuses on the evidence base to support these indicators, rather than their institution, or lack thereof, by the defendants in question.

Q. Would you agree that it is not the goal of your opinions in your report, including Appendix F, to have a specific impact on the dispensing patterns that exist?

A. Based on the totality of evidence

I've reviewed, I believe there are enormous opportunities for pharmacies to improve the safe distribution of controlled substances, such as opioids, in the supply chain.

Q. And that's a totality for pharmacies in general, not -- you haven't looked at the specific conduct of these defendants; is that right?

A. That's correct.

Q. If you look at -- I want to review with you some of the information in your redress models. So let's go to what I've marked as Exhibit 3.

I think we'll be able --

MR. MANNIX: Lauren, are you able to pull that up onto Exhibit Share?

A. I'm comfortable without doing so, as long as it's something that I can find.

Q. (BY MR. MANNIX:) Okay. All right. Let's see if we can go without it. And then, if we need to, we will.

MS. CATANZARITE: Exhibit 3 is currently on Exhibit Share. But if you want me to, I can share my screen.

MR. MANNIX: Yeah. We'll see if we

need that if there's one tab that's hard to read, or not all the information is included.

MS. CATANZARITE: Sure.

Q. (BY MR. MANNIX:) If you look -- and we're going to discuss on Lake County as an example.

If you look, Doctor, at 1D of your redress model for Lake County. You indicate here -- why don't you explain what this generally -- this program or this topic, what this is meant to achieve. "Achieve" is the wrong word. What do you see as being the services provided under this category?

A. Sure. So this category -- and there's a section of my report, to be clear, that describes this in more detail.

Q. Right. I think for all of these, right?

A. That's right. That's right. So, you know, if you'd like that detail, I think we should look at my report for that information.

But the broad idea here is to help promote what we call primary prevention. In other words, preventing new individuals from developing opioid use disorder, nonmedical opioid use and the

like, through the support of -- through the support of community coalitions and community-based organizations.

Q. Okay. You indicate under Number 3, "Total number of community spaces." And for each year of the fifteen years of the model, it's 1.0, correct?

A. Yes.

Q. What does that represent, that number and -- go ahead.

A. Well, for any given input to these, I describe the source or the rationale further down the page. So in this instance, I write, "I assume one community physical space to host forums, seminars, training sessions and community meetings."

Q. Now, is that your assumption that that is an existing space or a new -- an existing community space or a new community space?

A. This is the same question that we have, you know -- I mean, it's a similar question to what we've discussed many times today, which is that my report didn't require me to net out specific services or programs quantitatively.

So I didn't require me to determine

whether or not there's currently a brick and mortar space or whether a new brick and mortar space needs to be provided.

Q. Okay. So you didn't look into that issue because it didn't matter to you, correct?

A. It wasn't what I was asked to do. It is not that I'm not -- it's not that I'm disinterested or wouldn't be -- you know, I'm very interested. But it's not -- was not required for me to make the recommendations that I made.

Q. Okay. And I'm not suggesting that you don't -- are not a caring person. But as far as your analysis goes, it wasn't critical for you to know that; is that right?

A. Correct.

Q. And then if you go to 2A, it talks about "Connecting Individuals to Care."

You see that?

A. Yes, I do.

Q. And then you have various numbers. And then you have the footnotes below or the notes below.

Under Number 4 to the notes, it says, "One voucher per week, fifty-two weeks."

Do you see that?

Did you say "yes," Doctor? I was looking down.

A. No. I'm looking.

Q. Okay. And that relates to total number of transportation vouchers needed for patients receiving outpatients OUD treatment per year. You see that?

A. Yes, I do.

Q. In that -- for the outpatient treatment, what percentage of the participants are you assuming will require travel vouchers?

A. I estimate here the -- well, I guess I'd like to look at this. I guess it would be helpful to see a little bit -- I'm changing my mind and would like to see it projected, if that's okay, because this is small.

Q. Yeah.

A. And I'd like to be sure that I give you the information that you seek.

Q. Yeah, that's fine.

MR. MANNIX: Lauren, can you bring that up, then?

MS. CATANZARITE: You should see my screen.

MR. MANNIX: Yeah, we -- I do.

And then we're looking at Note 4. So you might have to drag that down a little bit.

Or is that it? That might be it.

MS. CATANZARITE: Can everyone see --

A. Yeah. That's much better. That's helpful. So -- although that's -- is that the right -- yeah, okay. So Tab 2A. Yeah.

So you asked sort of about this -- you asked the number of patients that I assumed would need transportation vouchers. And I think it's all patients that are receiving outpatient care.

Q. (BY MR. MANNIX:) Okay. And I think my question was the percentage. But you're saying a hundred percent of the people --

A. Correct. Correct.

Q. -- is your assumption?

What is that based upon that you assume that a hundred percent of the participants would need vouchers?

A. Well, I provide a reference -- I provide a reference for that in -- I don't know what row it is, but it's -- well, one voucher per week. So it's Row 44 here, the center for substance abuse treatment, substance abuse

administrative issues and outpatient treatment, treatment improvement protocol series is the basis for that recommendation.

Q. Okay. Is that specific to Lake and Trumbull County --

A. I don't believe -- I don't believe that it is. But, again, as with all of the inputs and sources of information, I considered issues of relevance to Lake and Trumbull County as I make my recommendations.

Q. Okay. But you didn't analyze whether -- presently, what percentage of people in outpatient treatment in Lake and Trumbull County actually need this form of transportation; is that fair?

A. My recommendations didn't require for me to do a detailed audit of the number of individuals within the county that -- that currently have adequate transportation or not for addiction treatment.

Q. Okay. And then the -- it also appears -- correct me if I am wrong -- that -- well, it says fifty-two weeks. That's every week of the year.

So you're assuming that if each

person in outpatient treatment would treat for fifty-two weeks out of the year, the full year; is that right?

A. Correct. I mean, these may not be the same precise individual, but I'm assuming that the demand would be -- that there would be sufficient resources to provide for transportation of at least one voucher per week for each individual in outpatient care.

So you can think of it as like a sort of -- a bed being occupied, or an outpatient slot being occupied. But it may or may not be by the one continuous patient for an entire year.

Q. And then the next, go down two columns to Note 6, which, if you go up at top, relates to the total number of transportation vouchers needed for patients receiving intensive outpatient OUD treatment per year.

And then Note 6 says, "Four vouchers per week for fifty-two weeks."

So once again, that's every week out of the year.

What is that based on? The same rationale that you just explained with the outpatient treatment?

A. Well, I would want to look carefully to see whether or not the reference is the same. Keep in mind that I had, you know, hundreds of references that I relied on in my report.

But the general intuition is that transportation is an important barrier to treatment; that intensive outpatient treatment is, by definition, more frequent and more intensive than just standard outpatient treatment, and that -- that for these slots that would be filled, that -- that whether or not it's one person continuously or not getting treatment, that they would be provided with transportation assistance and that those treatment slots would be filled throughout the year.

Q. Turn to the next page, 2B, which is "Treatment for Opioid Use Disorder."

Do you see that? I guess it's on the screen.

But if you look at the proportion of individuals with OUD to receive treatment, and there's some numbers from 2021 to 2035. And down in the note it explains the assumptions of that yearly estimate from forty percent in Year 1 to sixty percent in Year 15, correct?

A. Correct.

Q. And then you provide more information about that, explain it was based on 2018 treatment episode data, TEDS, right?

A. Yes.

Q. And approximately twenty to thirty percent of individuals with OUD were in treatment at some point in the past twelve months nationally.

And then you identified the World Health recommendation of -- a recommended forty percent minimum target.

What is that based upon that, with those numbers, the twenty to thirty percent of individuals from the TEDS source, and then forty percent minimum from World Health Organization, you make the assumption of forty percent in Year 1 to sixty percent in Year 15?

How did you jump to those numbers?

MR. ARNOLD: Objection to form.

A. Well, I mean, listen, we -- it's -- I mean, it's a bit surprising or shocking, frankly, to talk about settling for anything less than everybody getting treated. I mean, imagine if I told you that our target for colon cancer is that, you know, rest assured, Mr. Mannix, we're going

to -- we're going to guarantee that we reach forty percent of people with colon cancer, and they're going to get high quality care next year.

So these are -- unfortunately, they're -- they're -- you know, they're pragmatic, they're in some sense conservative, and yet they're also ambitious estimates all at the same time.

In other words, I believe that we can achieve forty percent. That would be a great improvement over what has taken place in many communities around the country. But it's far too little. And sixty percent is much better.

But, again, if I told you, you know, fear not, you know, we're going to be sure that sixty percent of people with multiple sclerosis have access to FDA-approved evidence-based treatments, there would be global outrage.

And yet -- you know, yet we're swimming upstream in many cases because of the -- because of the, you know, historic challenges, including resource constraints, in building out the infrastructure that we need.

So I believe that a forty percent target up to a sixty percent target over fifteen years is achievable. And I estimate that, along

with the other recommendations that I make, we can reduce morbidity and mortality by fifty percent or more over fifteen years.

Q. (BY MR. MANNIX:) Understanding that that's the numbers you are seeking to achieve, is there any basis for those particular numbers, as opposed to other numbers more or less than those numbers?

A. Well, what -- what numbers would you be proposing? I mean, I'm --

Q. You -- I'm not proposing numbers. You proposed numbers, and I want to understand the basis for those numbers is all.

A. Yeah. Yeah. Sure. Sure. The numbers are based on my review of the totality of evidence, and my review of models, modeling different impacts, and my review of many different abatement programs in cities and counties and states around the country.

And so the numbers represent the -- my best evidence, as I sit here today, regarding what we should be targeting in these communities.

Q. If you look at Note 4 -- let's see if that needs expanded. You know, once again, you have TEDS data, 24.5 percent, and then you have

yearly estimate from thirty percent Year 1 to sixty percent in Year 5.

And those percentages are based on -- that you use, are based on what? Thirty percent and sixty percent?

A. Yeah. But this is estimating something different. I mean, Row 2 is estimating the proportion of individuals with opioid use disorder to receive treatment. Whereas, Row 4 is estimating the proportion of individuals with OUD in treatment to receive medication-assisted therapies.

Q. Right.

A. So Rows 2 and 4 are doing different things. But you're correct that the source for Row 4 is based on Ohio-specific TEDS data, as well as information from the Substance Abuse and Mental Health Services Administration.

Q. Okay. What steps did you take to confirm that the sixty percent goal that you have was achievable, in other words, that sixty percent of OUD treated population would accept MAT?

A. Well, I just want to correct one thing that I said.

In looking at this, I think that

there was just one source. I think my last answer suggested that there were two separate sources. But I think the source was one and the same, which is the SAMHSA data, the Substance Abuse and Mental Health Services Administration data.

But you asked what reason do I have to believe that sixty percent is achievable, and that that many people will accept MAT. And I think your question is a great one, and it points out that there has been widespread stigma and misinformation about medications to treat addiction that have contributed to the very tepid uptake of these treatments in some settings.

And so that's why one of the things that I recommend are broad, multi-faceted campaigns to destigmatize these FDA-approved evidence-based treatments. I think sixty percent is achievable based on the totality of evidence that I have reviewed.

Q. Okay. And can you provide any specifics, other than the totality of evidence, as to what you relied upon for that?

A. I can, but it will take time. I would want to review with you the sections of my report that discuss stigma, the sections of my

report that discuss --

I'm sorry. I'm getting a -- some Zoom alert.

The sections of my report that discuss a treatment uptake. The information that's contained within the SAMHSA materials that I reference, and so on and so forth.

Q. If you look at Exhibit 3D -- not Exhibit 3D, Section 3D of your redress model. And this speaks to mental health counseling and grief support; is that right?

A. Yes, it does.

Q. In a family with opioid-related death, what percentage -- based on your redress model, what percentage of the family members are you assuming will want or need grief support? Are you assuming all members or a percentage less than all?

A. I believe all members. I cite the median household size in Lake County as being 2.4 individuals. And then multiply the total number of opioid deaths by that number.

I mean, there are a lot of ripples of the effect of -- an overdose death has. But I suppose a conservative estimate is focusing just on

the nuclear family alone, although this is a multigeneral -- multigenerational epidemic all too often, and the loss is felt and ricochets throughout different generations.

Q. So it says in Note 6, input is fifteen hundred. What does that number represent where it says fifteen hundred?

A. Yeah. That's focused on individuals with chronic pain. So the idea here for this abatement remedy is not just to focus on those that have lost loved ones, but also to improve the quality of care for individuals with chronic pain. Because, in many cases, opioids have been oversupplied at the expense of other safer and more effective alternatives.

And so that number, fifteen hundred, is derived from estimates regarding the total number of individuals to receive mental health counseling, as well as the number of bereaved family members to receive support.

Q. Okay. The -- at the -- your citation for that number, number of unique patients per counts per year, six patients per day, at the end it says, "Expert opinion." And we see that at various points throughout your report.

When you say "expert opinion," what are you referring to? Is that your opinion?

A. Well, in many cases, expert opinion is listed as one of many different inputs for a given parameter. So there may be three or four alternative estimates of a number like the number of lives saved for every naloxone dose distributed, or something like that.

And so, in some cases, expert opinion I've provided as an additional input because it takes expert opinion in order to interpret and combine and assimilate different data sources that may use different methods to estimate slightly different measures in slightly different populations and so on and so forth.

In other cases, there was no such literature available. And in those instances, expert opinion represents the combined expertise of myself as well as other experts who I may have consulted with in arriving at any particular estimate.

Q. Okay. Now, when you -- the first circumstance where you identify -- you said there's various sources. And you then take that and compile your own -- it sounded like you then gather

that information and come to some assumptions based on that. And that may not be using your exact words.

But I don't think, in those situations -- or I haven't seen a situation where there's referenced expert opinions, and then the various sources you are gathering and combining are cited. Or am I incorrect on that? Do you leave those sources that you're referring to out?

A. No. In no case did I omit sources, that I'm aware of, from my expert report.

So if there was a setting where I was looking at a number of different data sources, and then interpreting the optimal value based on those, using expert opinion, I would -- I would stipulate such.

Q. Okay. So for this instance, then, are you saying that that's the second category, the instance I'm looking under 3D, where it says, "Expert opinion," you didn't have these various data sources, you just based that on your own expert view; is that right?

A. In this type of instance, "expert opinion" refers to my best estimates, which, in many cases, were based on further discussion with

other health policy, public health, addiction and pharmacy experts.

Q. Turning back to 1C of your report. Turning -- let's go to 3. I'm sorry. Let's go back to 3. 3C before we go to 1C.

In this situation, I note under, "Suggested costs," you have some information. And then you cite the Washington Statewide Reentry Council as a basis for that.

Is there a reason that you didn't use -- attempt to use Ohio-based figures to come to that conclusion?

MR. ARNOLD: Objection to form.

A. I always used local data when I felt that the local data was the best data to be used.

I mean, my North Star is: What's the best data source for this particular question?

And as I described in my expert report, I used a careful process, and a conservative process, to identify those sources.

Q. (BY MR. MANNIX:) If you look at 1C. Go to 1C. When you reference --

MR. MANNIX: Are you there yet?

Q. (BY MR. MANNIX:) Do you have that in front of you, Doctor, or do you want to --

A. Yes. Yes, I do.
Q. Okay.
A. Although, it would be helpful to, yeah, show it here too. But, yes, I do.
MR. MANNIX: Okay. There you go. Here we go.
Q. (BY MR. MANNIX:) So, again, if you go down to the bottom there where it says, "Suggested costs," and you're providing potential costs for these programs, you're using California and Washington information.
Is there a reason, in that instance, why you didn't use Ohio information?
Well, let me ask you this: Did you look for Ohio information that related to that?
A. Yes, I did.
Q. And you couldn't find it?
A. Well, I may have found something, but I -- if I found it, then it -- if I found it and it's not referenced here -- if I found it, then it's referenced somewhere in my report.
And if it's not included here, it's because I didn't feel that it was the best source of information to use.
So I may have found something

locally; I don't know. But I can tell you that -- that the quality of information matters a great deal here, as does the potential similarity or dissimilarity in what's being estimated between where -- the population where it's being estimated and Lake and Trumbull Counties.

Q. Okay. Now, you've provided testimony and were retained in a King County, Washington case, correct, previous to this case?

A. I mean, I was retained in a Washington case that I think has been disclosed. And anything that I've been retained in that has been disclosed has been disclosed in an appendix.

Q. No. And I understand that. I just -- I'm looking here in your report. You submitted a report, in January of 2021, for a State of Washington versus McKesson, Washington Superior Court, King County. And I wanted to understand if that information that you have included there was taken from that -- the work on that case?

A. I don't know the answer to that. But I can tell you that it has been very helpful to have been -- had the opportunity to be engaged in multiple cases because it has allowed for me to develop a confident appraisal of the evidence base

supporting the interventions and the costs of the interventions that I propose.

Q. With respect to the interplay between your report and the redress models you have here, can you explain the relationship between the discussion in your report and the selected components that are included in your redress models?

A. There's a very close relationship between the discussion in my report and the interventions that are proposed in my redress models.

Q. Okay. And could you explain that, just in general, besides saying it's a close relationship?

A. Well, the redress models are my effort -- represent my effort to estimate the specific populations, and in select cases the costs of interventions as they would be applied to Lake or Trumbull Counties.

Q. And how did you select which inputs to include in the redress models for each category?

A. Well, that's hard to discuss in the abstract. But maybe we could look at a particular instance.

Q. Okay. Why don't we take the example of -- what's up on the screen now?

A. Drug disposal.

Q. I don't know. Is that what's up there, 1C? Why don't we just go to 1A.

A. Okay. So you asked how did I decide which inputs to use in developing this model. I thought through if academic detailing and continuing healthcare provider education were to be required, what would be important to know in order to estimate the populations of individuals to receive this.

And so I felt, for example, that when it comes to academic detailing, it would be important for me to estimate Input 1: The total number of prescribers eligible in the County;

Input 2: The number, the proportion to receive detailing;

Input 3: Not the proportion, but the absolute number of providers to receive detailing;

and, Input 4: The number of academic detailers required for that.

So there's sort of a sequential process for any of these categories that I used in order to identify the components of a given

category.

Q. We were talking earlier in instances where you identify expert opinion as the source. And you said there's two situations. One where you -- there's not a specific data source, and you, based on your experience, come to that conclusion.

And there's others where -- I know I'm paraphrasing. There's data sources you gather and you use those to combine or correlate and come to expert opinion.

Can you show me examples, in your redress model, of the situation where you do have data sources and you're combining them or --

A. Sure.

Q. I just want to see one to make sure I know what you're talking about.

A. Of course. So Tab 1E, like echo, the description under Input 1, if you scroll down further -- right here is perfect.

So if you look at Row 28, you can see how this played out. So --

Q. Okay. Are you done testifying on that?

A. Yes, I am.

Q. When you said "played out," I thought

you were going to explain how it played out.
A. Well, I -- yeah, I said "so" --
Q. So that's an example --
A. Sorry. Go ahead, please.
Q. So the citations you have before the word "expert opinion" are what you took and you compiled and combined; is that right?
A. Yeah. I mean --
Q. "Combined" is the wrong word. Go ahead.
A. I would say I synthesized --
Q. Good.
A. -- and interpreted.
Q. That's right. So you synthesized and interpreted.
And then if you go down a few lines below that under 4, there's one saying assuming one permanent site and one mobile van, expert opinion, that's an example of where you did not synthesize and interpret; is that right?
A. Well, I mean, there's still synthesis. I think it's just a question at what level. I mean, I'm aware of the broad reach of syringe service programs. And there's a large literature supporting these that I discuss in my

report.

And so it's not as if -- and, frankly, the matter that there's a mobile van is very important. And there's evidence to support that as well.

So -- and a mobile van is going to reach different populations than the permanent site will.

So I don't want to misconstrue expert opinion as anything other than what it was, which was my effort to combine the totality of my knowledge, and in many cases, a reading of relevant literature with -- with my best judgment and, at times, the judgment of others with whom I consulted.

Q. Okay.

A. Let me -- let me try to say that more succinctly for you. There is still scientific sources of information that, broadly speaking, I rely upon, when I cite expert opinion alone, as the basis for a parameter.

It's simply that those sources of information are not so directly relevant that they would substantiate the parameter in and of themselves if I provided them.

Q. But they are not cited in your report, so we can't look at those and analyze those?

A. That's not true.

Q. Well, give me the example of that one right there, assuming one --

A. Okay.

Q. -- permanent site and one mobile van. Where can I see what you're interpreting and synthesizing there?

A. I will be happy to do so. It will take a little bit of time, but I will be happy to do so.

(Pause.)

A. Okay. So for example, Paragraph 78 from my report, "Mobile harm reduction programs are one tool to significantly improve access for hard-to-reach populations, including those that do not have access to transportation or who may reside in rural areas.

"Mobile SSPs (syringe service programs), are already in use in other Ohio locations, including an SSP in Dayton, Reference 260:

"A review of twelve HIV outreach

programs, which included harm reduction services, found that clients who accessed mobile units were eighty-six times more likely to receive an HIV test than those who accessed other sites.

"Reference 261. The authors noted" -- and so on and so forth.

That's just one example. I could give you many more that support this assertion that there be both a mobile and a brick and mortar syringe service program.

Q. But for purposes of understanding and reviewing and interpreting your report, your expectation, for us to understand that, is that we would see expert report -- you don't cite it in the redress model, to then turn back to your section of your report that speaks to harm reduction and see if we can find it there; is that generally correct?

A. Well, I don't think it is a -- I mean, my report is, I think, fairly presented. But to answer your question specifically, I believe both the review of the -- I believe the review of my narrative report is a helpful complement to the review of any specific component of my redress models.

That's -- I mean, that gets to your

question as to what's the relationship between the narrative report and the redress models.

And the bottom line is that they support each other, and I think that they should be reviewed and interpreted in conjunction with one another, not in isolation.

MR. MANNIX: Why don't we do this, let's go off the record for -- take a quick break.

THE VIDEOGRAPHER: Off the record, 3:21.

(Whereupon, a break was had from 3:21 p.m. until 3:33 p.m. EDT)

THE VIDEOGRAPHER: We are back on the record at 3:33.

MR. MANNIX: Dr. Alexander, I do not have any further questions. Let me just confirm it from defense counsel. I understand -- I don't think they do, but I just want to make sure I don't have that incorrect.

Sharon, Adam --

MR. FOTIADES: No questions for CVS.

MS. DESH: Nothing from me, thank you.

MS. MOORE: No questions from Walmart. Thank you.

MS. BUECHNER: No questions for Rite Aid. Thank you.

MR. MANNIX: Okay. So that's it for now. We'll reserve our right. I think we're a little less than four and a half hours, so we'll reserve our right in Phase 2 to ask additional questions for the hour and a half we have not spent.

But other than that, we're ready to conclude.

THE VIDEOGRAPHER: Okay. We will --

MR. ARNOLD: All right. Sorry. Plaintiffs do not have any questions.

I'm not sure if under the terms of the litigation or any agreement, whether you can save your hour and a half and use it later. But I'm sure we can discuss that later. I don't know one way or the other.

MR. MANNIX: Yeah. We don't need to resolve it now. I understand your thoughts and you know ours, so we'll deal with that later. Thanks.

A. Thank you very much.

THE VIDEOGRAPHER: Okay. We're off the record, 3:34.

(Deposition concluded at 3:34 p.m. EDT)

FURTHER THE DEPONENT SAITH NOT

C E R T I F I C A T E

STATE OF ALABAMA
JEFFERSON COUNTY

I hereby certify that the above and foregoing deposition was taken down by me in stenotypy, and the questions and answers thereto were reduced to typewriting under my supervision, and that the foregoing represents a true and correct transcript of the deposition given by said witness upon said hearing, to the best of my ability.

I further certify that I am neither of counsel nor of kin to the parties to the action, nor am I in anywise interested in the result of said cause.

LAURA H. NICHOLS
Commissioner-Notary Public, State of AL
ACCR License No. 3, Exp. 9/30/2021
GA CCR No. 2714, Exp. 4/1/2022
TN LCR No. 679, Exp. 6/30/2021
Transcript Certified on 5/31/2021

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1100 Superior Ave
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Cleveland, Ohio 44114
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June 1, 2021

To: Andrew P. Arnold, Esq.

Case Name: National Prescription Opiate Litigation - Track 3

Veritext Reference Number: 4611957

Witness: Caleb Alexander, M.D. Deposition Date: 5/27/2021

Dear Sir/Madam:

Enclosed please find a deposition transcript. Please have the witness review the transcript and note any changes or corrections on the included errata sheet, indicating the page, line number, change, and the reason for the change. Have the witness' signature notarized and forward the completed page(s) back to us at the Production address shown above, or email to production-midwest@veritext.com.

If the errata is not returned within thirty days of your receipt of this letter, the reading and signing will be deemed waived.

Sincerely,
Production Department

NO NOTARY REQUIRED IN CA

DEPOSITION REVIEW
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 4611957
CASE NAME: National Prescription Opiate Litigation - Track 3
DATE OF DEPOSITION: 5/27/2021
WITNESS' NAME: Caleb Alexander, M.D.

In accordance with the Rules of Civil Procedure, I have read the entire transcript of my testimony or it has been read to me.

I have made no changes to the testimony as transcribed by the court reporter.

_____ _____
Date Caleb Alexander, M.D.

Sworn to and subscribed before me, a Notary Public in and for the State and County, the referenced witness did personally appear and acknowledge that:

They have read the transcript;
They signed the foregoing Sworn Statement; and
Their execution of this Statement is of their free act and deed.

I have affixed my name and official seal

this _____ day of_____, 20____.

_____
Notary Public

_____
Commission Expiration Date

DEPOSITION REVIEW
CERTIFICATION OF WITNESS

ASSIGNMENT REFERENCE NO: 4611957
CASE NAME: National Prescription Opiate Litigation - Track 3
DATE OF DEPOSITION: 5/27/2021
WITNESS' NAME: Caleb Alexander, M.D.

In accordance with the Rules of Civil Procedure, I have read the entire transcript of my testimony or it has been read to me.

I have listed my changes on the attached Errata Sheet, listing page and line numbers as well as the reason(s) for the change(s).

I request that these changes be entered as part of the record of my testimony.

I have executed the Errata Sheet, as well as this Certificate, and request and authorize that both be appended to the transcript of my testimony and be incorporated therein.

_____ _____
Date Caleb Alexander, M.D.

Sworn to and subscribed before me, a Notary Public in and for the State and County, the referenced witness did personally appear and acknowledge that:

They have read the transcript;
They have listed all of their corrections in the appended Errata Sheet;
They signed the foregoing Sworn Statement; and
Their execution of this Statement is of their free act and deed.

I have affixed my name and official seal this _____ day of_____, 20____.

_____
Notary Public

_____
Commission Expiration Date

ERRATA SHEET

VERITEXT LEGAL SOLUTIONS MIDWEST

ASSIGNMENT NO: 4611957

PAGE/LINE(S) / CHANGE /REASON

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_____ _____

Date Caleb Alexander, M.D.

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____

DAY OF _____, 20_____ .

_____

Notary Public

_____

Commission Expiration Date

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

Veritext Legal Solutions complies with all federal and State regulations with respect to the provision of court reporting services, and maintains its neutrality and independence regardless of relationship or the financial outcome of any litigation. Veritext requires adherence to the foregoing professional and ethical standards from all of its subcontractors in their independent contractor agreements.

Inquiries about Veritext Legal Solutions' confidentiality and security policies and practices should be directed to Veritext's Client Services Associates indicated on the cover of this document or at www.veritext.com.